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BORNMÜLLER ET SON OEUVRE COMME EXPLORATEUR BOTANIQUE EN IRAN

par

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Le 19. décembre 1948 Josef Bornmüller mourut à Weimar, Allemagne, à l'âge de 86 ans. Après Aucher-Eloy, Kotschy et Haussknecht il est le plus grand des botanistes explorateurs en Orient, surtout en Iran. Sa vie etait devouée complètement à la botanique dès son adolescence jusqu'à ses dernières années. Il a parcouru à maintes reprises toute la région méditerranéenne et le proche Orient des Balcans à l'Arabie et au Tourkestan. Deux fois il a visité l'Iran.

Pendant les années 1892 et 1893 il a parcouru l'Iran du nord au sud, explorant surtout la province de Kerman alors complètement inconnue, les côtes du Golf Persan et les montagnes du Kourdistan. En 1902 il a exploré surtout certaines parties de la chaîne de l'Elbours, accompagné par son frère.

Le nombre de ses publications est de 274 dont la plupart s'occupe de l'Orient et environ 65 de la flore de l'Iran, y compris deux de ses publications les plus importantes: Iter persico-turcicum (non achevée) et Beiträge zur Flora des Elbursgebirges.

Bornmüller s'est borné strictement aux descriptions de nouvelles espèces, aux remarques critiques, aux révisions et aux énumerations. On regrette vivement qu'il n'ait presque jamais publié ni de récits de ses voyages ni d'observations phytogéographiques.

En 1939 j'avais le privilège de travailler deux semaines à Weimar, à l'Herbier Haussknecht dont Bornmüller était conservateur pendant 35 années. Grace à sa bienveillance j'avais l'occasion de me familiariser sans délai avec la flore des régions les plus lointaines de l'Orient. En même temps j'avais le plaisir de faire la connaissance d'un des plus remarquables botanistes de cette époque. Sa mémoire pour les moindres détails, sa sagacité, son infatigabilité étaient également sans pareilles. A l'occasion de quelques excursions communes dans l'été de 1938 en Carinthie, j'étais frappé par son agilité, qui lui permettait, â l'âge de 76, de gravir les pentes les plus raides et de parcourir des distances considérables. Retourné des excursions il se mit immédiatement à la préparation de sa récolte d'un façon aussi énergique et rapide qu'exacte et même délicate — car il n'était pas seulement explorateur et collectionneur passionné, mais aussi amateur des plantes, comme d'abord bon nombre de ses confrères les plus illustres.

Autodidacte au sens propre Bornmüller était influencé surtout par son ami Haussknecht, que, de sa part, reliaient des liens étroits d'ami et de collaborateur à Edmond Boissier. C'est ainsi qu'en effet le centre de l'exploration botanique de l'Orient se déplaça de plus en plus de Genève à Weimar après le décès de Boissier en 1885.

L'expérience montre donc la nécessité d'une véritable personalité pour mettre en valeur les richesses d'un herbier et d'une bibliothèque et pour continuer une tâche telle que l'exploration botanique de l'Orient (dont seulement la première étappe a été marquée par la publication de la fameuse Flora orientalis de Boissier) et qu'il ne suffit pas d'un institut ou d'une organisation quelconque. Quant à Haussknecht, ses qualités d'explorateur et de systématicien sont indiscutables, à en juger d'après les résultats de ses voyages et d'après son excellente monographie du genre Epilobium. Mais comme ses ouvrages furent interrompus par sa mort imprévue il nous avait laissé ses propres collections enrichies par celles de Strauss de Sultanabad dans un état un peu chaotique; ses notes, souvent limitées à la remarque laconique "nouvelle espèce" ont souvent l'air un peu rhapsodique. C'est grâce à Bornmüller que tous ces trésors ont été sauvés, que toutes ces collections énormes ont été mises en ordre et les notes soumises à une critique aussi amicale qu'incorruptible.

Bornmüller a consacré des années à la détermination et à la publication des collections de Haussknecht et de Strauss. Il s'était dévoué à ces devoirs et à bien d'autres du même genre ainsi qu'il ne trouvait pas le temps — hélas — d'achever la publication de deux de ses plus importants ouvrages basés sur ses propres collections: les Symbolae anatolicae et l'Iter persico-turcicum. Le premier s'est arrêté à la famille des Composées selon le système de De Candolle adopté pour la Flora orientalis, le dernier à la fin des Scrophulariées. L'herbier de Bornmüller acquis par le Musée Botanique de Berlin a été détruit en partie pendant la guerre, l'accomplissement de ses oeuvres n'est pas réalisable pour le moment et ne le sera peut-être jamais si les familles pas encore traitées dans ses publications, sont anéanties.

Heureusement la série Florulae Keredjensis fundamenta, s'occupant de la flore de Keredj, basée sur les collections de Erwin Gauba, Professeur de Botanique à l'Ecole supérieure d'Agriculture de 1933 à 1941, a été terminée et même un supplément a paru vers la fin de la guerre.

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Liste des publications principales de Bornmüller sur la Flore iranienne:

Beiträge zur Flora der Elbursgebirge Nord-Persiens in Bull. Herb. Boiss. 2. Ser., 4 : 1073-1089, 1257-1273 (1904), 5 : 49-64, 117-132, 639-654, 752-767, 837-850, 969-972 (1906), 6 : 605-620, 765-780 (1906), 32-43, 209-224, 425-436, 773-788, 965-980 (1907), 8 : 109-124, 545-560, 723-738, 821-836, 915-930 (1908).

Plantae Straussianae, sive enumeratio plantarum a Th. Strauss annis 1889-1899 in Persia occidentali collectarum in Beih. Bot. Centralbl. 19,2 : 195-270 (1905), 20,2 : 151-196 (1906), 22,2 : 102-142 (1907), 24,2 : 85-112 (1908), 26,2 : 434-444 (1910).

Collectiones Straussianae novae. Weitere Beiträge zur Kenntnis der Flora West-Persiens in Beih. Bot. Centralbl. 27,2 : 288-347 (1910), 28,2 : 225-267, 458-535 (1911).

Reliquiae Straussianae. Weitere Beiträge zur Kenntnis der Flora des westlichen Persiens in Beih. Bot. Centralbl. 32,2 : 349-419 (1914), 33,2 : 165-269 (1915).

Iter Persico-turcicum 1892-1893. Beiträge zur Flora von Persien, Babylonien, Assyrien, Arabien in Beih. Bot. Centralbl. 28,2 : 89-171 (1911), 57, B : 247-294 (1937), 58, B : 252-302 (1938), 60, B : 181-228 (1939), 61, B : 72-123 (1941).

Bearbeitung der von Knapp im nordwestlichen Persien gesammelten Pflanzen in Verh. Zool. Bot. Ges. Wien 60 : 61-194 (1910).

Aus der Pflanzenwelt des inner-iranischen Wüstengürtels in Fedde, Repert. spec. nov. 40 : 323-340 (1936).

Aus der Pflanzenwelt von Iranisch-Balutschistan und der angrenzenden Wüste Lut (Gabriel: Iter irano-gedrosiacum a. 1937) in Beih. Bot. Centralbl. 59 : 287-316 (1939).

Zur Flora von Persien in Notizbl. Bot. Gart. u. Mus. Berlin-Dahlem 14,123 : 270-287 (1938).

Plantae Brunsianae. Aufzählung der von F. Bruns im nördlichen Persien gesammelten Pflanzen in Beih. Bot. Centralbl. 33,2 : 270-334 (1915).

Florulae Keredjensis fundamenta (Plantae Gaubeanae iranicae) in Fedde, Repert. spec. nov. 39 : 73-124, 370-372 (1935/36), 41 : 297-344 (1937), 47 : 52-80, 121-137 (1939).

Florulae Keredjensis fundamenta (Plantae Gaubeanae iranicae). Supplementum in Fedde, Repert. spec. nov. 49 : 253-272 (1940), 50 : 365-376 (1941), 51 : 33-48, 84-112, 209-233 (1942).

Bibliographie:

Zu Joseph Bornmüllers fünfundsiebzigstem Geburtstage. Von O. Schwarz in Fedde, Repert. spec. nov. Beih. 100 : 1-10 (1938).

Verzeichnis der von J. Bornmüller verfassten Arbeiten. Zusammengestellt von Tad. Wisniewski in Fedde, Repert. spec. nov. Beih. 100 : 11-27 (1938).

THE TYPIFICATION OF THE NAMES "OXALIS CORNICULATA L." AND "OXALIS STRICTA L."

by

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The taxonomy and nomenclature of the caulescent Oxalis related to *O. corniculata* L. have long been a source of confusion, centering mostly on three taxa, with which are involved the two Linnean names, "O. corniculata" and "O. stricta". The taxa are generally recognized today as being in three separate species, and further morphological and breeding evidence I have accumulated and which will be published soon supports this view. Until their names are settled, I shall, following Robinson (1906), call them Species I, II, and III. Their characters are:

Sp. I — Pantropical, spread into temperate areas in lawns, gardens, and in and around greenhouses. Stems creeping from a thin taproot, subglabrous to pubescent with appressed or spreading nonseptate (very rarely some septate) hairs, usually rooting at most nodes and sending up leaves and inflorescences only or also short aerial shoots; white succulent rhizomes none; leaves often purplish, with broad often auriculate stipules; inflorescence 1-several flowered, umbellate; fruit hoary with appressed nonseptate hairs and often longer patent septate hairs; seeds brown, only very rarely with white markings on the transverse ridges. This species is usually called "O. corniculata L.", or sometimes "O. repens Thunb.", or the latter name may refer only to a small form of the species.

Sp. II — Native to and common in eastern and central United States. Introduced into Europe and widespread there, and perhaps present also in Africa and western Asia as a weed. A related form which may be conspecific is native to East Asia. The American plant is typically erect or at length decumbent, tall, large-leaved, the stems subglabrous to densely covered with patent septate hairs, usually also with some short appressed nonseptate hairs, or the latter present alone but thinly so; white filiform succulent rhizomes present, easily broken off in collecting; leaves often purplish, petioles mostly with septate hairs at the base as well as nonseptate ones, stipules none; inflorescence mostly many-flowered, usually cymose; pedicels glabrous to densely pubescent with septate or nonseptate hairs or both; fruit glabrous to patent septate-hairy; seeds brown, only rarely with white markings on the transverse ridges. This species is known as "O. stricta L." in Europe, and as "O. europaea Jord." in the U.S.

Sp. III — Native to the U.S., very common in the eastern and central states, very rare in western Europe, where introduced. Usually cespitose, branching at base; stems usually densely strigose with white nonseptate hairs; white succulent rhizomes none; leaves mostly green, petioles never with septate hairs, stipules broad or narrow, not auricular; inflorescence 1-several flowered, mostly umbellate; pedicels densely strigose with nonseptate hairs; fruit hoary with appressed nonseptate hairs and often longer patent septate hairs; seeds brown with definite white markings on the transverse ridges. This species is called "O. stricta L." in the U.S., and "O. Navieri Jord." or "O. corniculata var. Dillenii (Jacq.) Trel." in Europe.

The Linnean references in Species Plantarum, 1753, are:

11. OXALIS caule ramoso diffuso, pedunculis umbelli — *corniculata*

feris. *Hort. Cliff.* 175. *Hort. ups.* 116. *Roy. lugdb.* 458. *Sauv. monsp.* 173. *Gort. gelr.* 91.
Oxys flavo flore. *Clus. hist.* 2 *p.* 249.
Trifolium acetosum corniculatum. *Bauh. pin.* 330. luteum minus repens etjam procumbens. *Moris. hist.* 2. *p.* 183. *s.* 2. *t.* 17. *f.* 2.
Habitat in Italia, Sicilia.
Confer. Oxalis lutea annua, floribus dentatis. *Few. per.* 3. *p.* 49. *t.* 24.

12. OXALIS caule ramoso erecto, pedunculis umbelliferis. *Gron. virg.* 161. *stricta*
Oxys americana erectior. *Tournef. inst.* 80. [88]
Trifolium acetosum corniculatum luteum majus rectum indicum s. virgineum. *Moris. hist.* 2. *p.* 184. *s.* 2. *t.* 17. *f.* 3.
Habitat in Virginia.

Typifying "Oxalis corniculata". The Feuillée reference, which is the cultivated Andean *Oxalis tuberosa*, does not have to be considered here for it occurs after the word "Confer." (meaning "compare"), by which Linnaeus refers to a plant he does not want definitely to put into one of his species but which he thinks is more closely related to that species than to any other he takes up. The other references are all to Sp. I, the Clusius and Morison plates clearly showing that species, and the descriptions, so far as they are distinctive at all, referring to it and not to Sp. II or III.

As to specimens that may be types of "corniculata" there exist the following:

1. A specimen in the Linnean Herbarium, sheet 600. 31, marked "corniculata" by Linnaeus. Jackson (1912) says this specimen was present in the herbarium in 1753, and Savage (1937), who corrects some of Jackson's datings, does not change this one. The plant is plainly Sp. I.

2. Two plants in the Clifford Herbarium, both of which Linnaeus saw of course, probably before 1739, the date of publication of Hortus Cliffortianus. He probably did not see these specimens afterwards (Lacaita 1912, p. 223-4; Wilmott 1915). One is marked with the Morison phrase name for Sp. I, but the plant is Sp. II. The other is marked with the J. Bauhin phrase name for Sp. I, and is Sp. I. Thus in 1739 Linnaeus' conception of Sp. I may have been wide enough to include a specimen of Sp. II, although in the synonymy of Hortus Cliffortianus under "O. corniculata" Linnaeus cited Morison's figure of Sp. I only, and not the figure of Sp. II. In any event, by 1753 he had distinguished between them, as will be seen.

3. A plant in the Morison Herbarium (Vines & Druce 1914, p. 13) and perhaps plants in herbaria of other early botanists to whom Linnaeus refers, many of which he probably never saw. Depending on when they entered those herbaria, they may or may not be taken as types of the early botanists' phrase names.

There are no definite rules as to just which of these specimens constitute the "original material" of "corniculata". If a person thinks that only one can be considered such, then it can be taken as holotype, but if more than one is accepted as "original material", then a lectotype must be chosen from among them, and if they are in different taxa then the choice has practical consequences. I believe that from among these specimens the Linnean Herbarium plant and the two in the Clifford Herbarium should be considered the original material, for those are the only ones we are sure Linnaeus saw before 1753. Therefore there is considered to be no holotype, and one must be picked as lectotype.

Robinson (1906) has already in effect chosen the Clifford Herbarium plant of Sp. II as the lectotype of "corniculata" (although he does not use that word). His reasons, I believe, are wrong or weak, but he did choose it so we must consider the choice. After regretting that the International Rules of his day did not provide ways of deciding between specimens for a type when more than one had a claim, and without favoring one way over the other, he used two customary methods, first-citation of reference, and residues, and found that both favor Sp. II. He said since Hortus Cliffortianus is the first-mentioned citation and there exists a specimen of Sp. II in the Clifford Herbarium, that is the type. But first citation *for choosing lectotypes* (its use for holotypes will come up later) is specifically ruled out today: "Mechanical systems such as the automatic selection of the first species or specimen cited . . . should be avoided as unscientific . . ." (Appendix I-4), and in any event Robinson did not mention that there was another specimen in the Clifford Herbarium which was Sp. I.

Using the residues principle independently, Robinson said Linnaeus left "corniculata" a heterogenous mixture of Sp. I and II, and that Thunberg (1781) was the first to take out Sp. I under another name, leaving Sp. II

for "corniculata". But as a matter of fact, Thunberg, although he took a small form of Sp. I out as "O. repens", left all the rest of Sp. I under his "corniculata". It is not clear whether the residues principle demands a complete separation of a presently-conceived taxon under another name, or whether only a partial one will do. However that may be and whatever Robinson's reasons were for choosing the Cliffort plant of Sp. II as lectotype for "corniculata", he in effect *did* so choose it, and it would have to stand (Article 18, note 3 and App. I-4e), changing almost universal and present-day usage. We are saved from this by the fact that Article 19 provides that a lectotype can be overthrown if "the choice was based on a misinterpretation of the original description". Robinson himself, although he quotes the original diagnoses of "corniculata" and "stricta" does not use them at all to help choose between Sp. I and II for "corniculata". The diagnoses differ only in that "corniculata" is described as "diffuso" while "stricta" is "erecto", referring to habit, but this is precisely the difference between Sp. I and the characteristic form of Sp. II. Therefore a choice of a Sp. II specimen can be considered a "misinterpretation". But besides this, if one wishes to interpret the residues principle so as to accept Robinson's use of it (that Sp. I was taken out of "corniculata" because Thunberg took part of it out as "repens") the International Rules state in Appendix I-4d, "If it can be shown that the element best fitting the whole published original account has been removed, it must be restored and treated as lectotype," and since the *whole* published original account includes all the literature citations as well as the diagnosis, and since they all refer to Sp. I, then Sp. I must be "restored". So on two different counts Robinson's choice cannot stand today, which preserves the present usage of the name. This leaves two specimens of Sp. I as type-candidates, and I hereby choose the one in the Linnean Herbarium, sheet 600. 31, the only one marked "corniculata" by Linnaeus, as lectotype of "Oxalis corniculata".

Typifying "Oxalis stricta". This is a more difficult problem and one in which there is more controversy, the choice being between Sp. II and III. The original diagnosis does not help much in choosing between the two species. The stem is called "erecto", which fits Sp. II (before it frequently becomes at length decumbent) better than the lower cespitose Sp. III. The peduncle is called "umbelliferis", and although this is much more characteristic of Sp. III in fruit than of Sp. II in fruit (this being usually cymose), nevertheless a peduncle of Sp. II in flower is frequently strictly umbellate, and as a matter of fact the specimen in the Linnean Herbarium marked "stricta" by Linnaeus and which is Sp. II, is that way. (This specimen cannot be considered a type, for according to Jackson it came into the herbarium after 1767). The reason the diagnosis is no help is because, as I shall hope to show, Linnaeus in 1753 did not know Sp. III (or at least he gave no indication of knowing it), and his diagnosis of "stricta", by which he meant Sp. II, was simply to differentiate it from Sp. I and the other Oxalis species.

First we must determine whether "stricta" has a holotype, and here we run into a viewpoint which it is necessary to refute. The first reference under "stricta" is to Gronovius' Flora Virginica, wherein, under the Gronovian phrase name, is cited a Clayton specimen by number (no. 474), which exists today in the British Museum, and is clearly Sp. III. This specimen is the holotype of Gronovius' phrase name, of course, and the argument runs that it is therefore the holotype of Linnaeus' "stricta", making that epithet then apply to Sp. III. The argument used is that the first literature citation, when it occurs just after and in the same paragraph as the diagnosis, is the most important one, that it *is* the species Linnaeus meant, the other citations being merely synonyms, which may or may not refer to the same taxon as we conceive it today, but which in any case do not matter. This view seems untenable, for, besides the fact that the Rules do not provide that citations with the diagnosis are automatically primary, a little searching through Species Plantarum will bring out an interesting fact I do not think has been mentioned before. Linnaeus grouped his citations according to the similarity of the phrase names used in the cited works. Those that used the same or almost the same phrase name were grouped together, such as the group of citations from "Hort. Cliff." to "Gort. gelr." given just after the diagnosis of "corniculata". Those works that used very different phrase names for what Linnaeus considered the same species or variety were cited in separate groups (different paragraphs) after their phrase names, and if the phrases were partially the same they were partially grouped, as the Bauhin and Morison referen-

ces under "corniculata". The principle was the same whether the phrase name happened to be one that Linnaeus could use as his own or not. Linnaeus' own phrase name, the "diagnosis", was an attempt to express in as few words as possible the essential features of a species (or variety) that separated it from all the other species in the genus taken up at the time. If such a phrase name, or one very similar to it, happened to have all the necessary differentiae and had already been used by Linnaeus or someone else, it was not necessary for him to make up a new one; he used it and after it, as usual, listed all the works that had also used it or a phrase very similar. But, the fact that a diagnosis Linnaeus found most convenient to use for *taxonomic* reasons should happen to be like a phrase name used in some earlier work should not give extra weight to the plant cited in that work. It does not mean Linnaeus thought that plant primary in his conception of the species and the rest merely synonyms.

This view is strengthened by noting that for many species Linnaeus found it necessary for current taxonomic distinction to so formulate his diagnosis that *no* previous citation of what he thought was the same species had a phrase name he could use for the diagnosis. In such cases he made up his own new diagnosis for Species Plantarum, and put *all* his citations (and there were often very many) in separate paragraphs. See Oxalis flava, O. incarnata, O. violacea, etc. It should be noted in these cases that these separated citations often had good descriptions and pictures or were even from his own previous works, so it is not that he was not able to tell which plant was meant, and there is no indication he was not definitely including them in his conception of the species. It was simply that their phrase names could not be used for his present diagnosis. Thus, as far as we can tell, all citations were equal in his regard except those he clearly questioned by placing them after the abbreviation, "Confer.". There is then no reason to regard the citations given with the diagnosis as meaning anything more than that he could use their phrase name as his own.

Therefore we have no right to regard the Gronovian reference given with the diagnosis of "stricta" as primary and its type as the automatic type of that epithet. It would be particularly undesirable to do so in the face of other evidence, all of which shows that Linnaeus meant another species. The type specimens of the other citations under "stricta" have an equal right to be regarded as "original material", or in the absence of specimens, cited plates. There happens to be more than one original element then, therefore no holotype, and the question resolves itself into one of choosing a lectotype.

The second reference under "stricta" is Tournefort. I do not know of any herbarium specimen of his, and in his Institutiones he merely gives a phrase name of his own and then cites Morison's species 3. Linnaeus' third and last reference is this same citation, and the cited Morison plate 17, figure 3 is distinctively Sp. II (even though it shows some of the fruit impossibly pendulous). It is not clear from Vines & Druce (1914) whether there is a plant in the Morison Herbarium that corresponds to this species (for see p. lxvii), and if so, whether Morison had it before the Historia was published. Until such evidence is forthcoming we may consider the figure as Morison's type.

We therefore have two original elements, the Clayton specimen of Sp. III that Gronovius cites and the Morison figure of Sp. II, and the choice depends on which species Linnaeus meant, if that can be made clear. First it is necessary to determine whether a lectotype has already been chosen. Small (1896) did not choose a lectotype in his discussion of "stricta", for to him, working by the first-citation rule of the American Code, the Clayton specimen (which he refers to only indirectly) *was* the type, with no choice involved. But Robinson (1906), referring directly to Clayton 494, selected it as lectotype (without using that word) for two reasons: that it is the type of the first citation, which reason is invalid today by Appendix I-4, and, independently, that since his first analysis gave "corniculata" to Sp. II, that leaves the formerly heterogenous name "stricta" to be applied only to Sp. III, making the Clayton specimen the type of that name. But, as we have seen, his first analysis that "corniculata" is Sp. II is wrong, therefore, this one is also. However, although his reasons are invalid, he did choose the Clayton specimen as lectotype of "stricta", and it must stand unless it can be shown that the choice is a misinterpretation of the original description.

As shown, the bare words of the diagnosis itself are of little help so that other evidence as to what Linnaeus meant is relevant. First of all, he probably did not see the Clayton specimen (Svenson 1945, p. 363), Gronovius

had no figure, and the only description (phrase name), "Oxalis caule ramoso erecto, pedunculis multifloris", is not distinctive. Gronovius also gave as his single reference Tournefort's phrase name for Sp. II. Linnaeus then probably thought Gronovius was referring to Sp. II, and since Gronovius' phrase name was nearly the form he wanted his own diagnosis for Sp. II to take, cited him after the diagnosis, while Tournefort's and Morison's phrase names, being very different and unusable, he cited on separate lines.

Further evidence that Linnaeus meant "stricta" to be Sp. II came into existence after 1753, but in the absence of anything to show he changed his ideas in the meantime, it may be used as an indirect clue to his conception in 1753. The first is that the only specimen marked "stricta" by Linnaeus, sheet 600.33 in the Linnean Herbarium, which Jackson says entered it after 1767, is a good specimen of Sp. II (Savage, 1945, says Linnaeus had originally written "corniculata" on this sheet, but later crossed it out and wrote "stricta"). Secondly, in the second edition of Species Plantarum, 1762, Linnaeus cites a Dillenius reference of 1732 which described Sp. III for the first time, and did so clearly and with a good plate, and carefully distinguished it from Sp. II. *This citation Linnaeus put under "corniculata", not under "stricta".* He cited it after the word "Confer.", showing he did not think it was definitely part of *O. corniculata,* nor a variety of it, but that it was more closely related to it than to any other of his species. Thus, when Linnaeus finally saw Sp. III, he definitely did not include it in his *O. stricta.*

Therefore, Linnaeus seems to have meant "stricta" for Sp. II, and Robinson's choice of the Clayton specimen cannot stand. The only other definite original material is the Morison plate 17, figure 3, and I hereby designate this figure as lectotype of "Oxalis stricta". The figure is sufficiently detailed for typifying infraspecific categories if necessary. It shows no hairs on the upper surface of the leaves, nor on the stem and pedicels, agreeing in these diagnostic details with most European plants of the species, and can be considered the nomenclaturally typical form.

It is interesting to note that this typification, making "stricta" apply to Sp. II, leads to the same result as the principle of residues, and follows almost universal usage up to the time Small and Robinson made American taxonomists misapply the name. Although on the basis of the above argument, it is not necessary to use residues, if we do, and consider "stricta" a heterogenous mixture of Sp. II and III, we notice that Jacquin (1794) first gave Sp. III a binomial, "O. Dillenii", based solely on Dillenius' description. This would seem to remove Sp. III from "stricta", leaving that name to Sp. II, but it is not clear whether the principle demands a complete separation, and what Jacquin left under his own "stricta" is not purely Sp. II, but seemingly also some Sp. III. For his plate of "stricta" shows wide stipules and reflexed pedicels, characters never present in Sp. II, but characteristic of Sp. III (as well as of I). Willdenow (1799), Persoon (1805), Pursh (1814) and De Candolle (1824) all had a "stricta" and a "Dillenii", which were probably meant to be Sp. II and III respectively, but the descriptive separation is not clear. Poiret (1816) had a detailed description of Sp. III under "Dillenii", but his description of "stricta" is meagre, making no sure separation possible. Finally Zuccarini (1825) made an unmistakable separation by stating that his "stricta" had "radice stolonifera", he probably being the first to record this important distinguishing character. Whoever is considered to have made the separation first, it all points to Sp. III being taken out of "stricta" (if it was judged to be in in the first place) and leaving the latter name for Sp. II.

As for usage, "stricta" up to the turn of the century has almost universally meant Sp. II alone, although with Elliott (1821) it is difficult to tell. Since 1896 it has meant Sp. III in America. Also in 1924 Hegi applied it to a concept which is mostly Sp. II, but with elements of Sp. III, while Knuth in his monograph of the genus in 1930 applied the name to a concept that completely combined Sp. II and III, in description, synonymy and varieties. Generally, however, Europeans have kept the name "stricta" for Sp. II alone, even to the 1952 British Flora by Clapham, Tutin, & Warburg.

Sp. II has occasionally been given other names, of which the most important at the specific level are the following. Bunge (1833) described an East Asian plant as *Oxalis fontana* which is closely related to Sp. II and may be conspecific. Jordan (1854) thought Sp. II in Europe was different from Sp. II in America, and since Linnaeus' "stricta" belonged to the American plant (the Linnean locality being "Virginia"), he called the European Sp. II "O. europaea". This is the name used in the U.S. today for

Sp. II wherever it occurs. Small (1896) called Sp. II "O. cymosa" and later (1903) described forms of it as *Xanthoxalis Bushii, X. rufa,* and *X. interior.*

Sp. III must receive its earliest correct name, which is "O. Dillenii Jacq.". Although the original Dillenius plate is distinctive, there is also a plant in the Hortus Elthamensis herbarium which is almost surely the plant Dillenius used (Druce & Vines 1907, p. 176), and therefore, if unique, is the holotype. "O. Dillenii" has never definitely been used in any other sense than for Sp. III, but it was dropped early in the 1800's. When noticed as separate from *O. corniculata,* Sp. III has occasionally received other names. Moris (1837) perhaps had it in mind for his "O. corniculata var. ascendens". Jordan (1854) definitely noticed it, and although he knew of the name "O. Dillenii", did not connect the two, but called it "O. Navieri", a name it still bears on the Continent. Trelease (1897) called it "O. corniculata var. Dillenii", while Americans since 1896 have been calling it "O. stricta L.".

SUMMARY

1. Three species of Oxalis have been involved in the application of the two Linnean names "O. corniculata" and "O. stricta". These species are described and temporarily designated Sp. I, Sp. II, and Sp. III.

2. "O. corniculata" is shown to have at least three specimens of original material, there thus being no unique holotype. Two are of Sp. I and one is of Sp. II.

3. The specimen of Sp. II had previously been chosen as lectotype, but the choice is rejected as a misinterpretation of the original description and of what Linnaeus clearly meant. One of the specimens of Sp. I is chosen as lectotype.

4. "O. stricta" has two elements as original material, there thus being no unique holotype. One is a specimen of Sp. III that Linnaeus probably never saw, and the other is a cited figure of Sp. II.

5. The specimen of Sp. III had previously been chosen as lectotype but the choice is rejected as being clearly against Linnaeus' conception. The figure of Sp. II he cited is chosen as lectotype.

6. The view that literature citations in Linnaeus' Species Plantarum that occur joined with the diagnosis are primary for purposes of typification over those that occur on separate lines is rejected.

7. Some history of the names for the three species is given.

8. The conclusions are:

Sp. I, the creeping, wide-stipuled, pantropical species, gets the name "Oxalis corniculata L.". *Oxalis repens* Thunb. is a synonym, a variety of it, or a separate species, depending on taxonomic judgement.

Sp. II, the tall, cymose, nonstipulate, white-stoloniferous species, native to North America and widespread in Europe, gets the name "Oxalis stricta L.". The East Asian *Oxalis fontana* Bunge is a synonym, a variety or a separate species, depending on taxonomic judgement. *Oxalis europaea* Jord. is a taxonomic synonym.

Sp. III, the hoary, cespitose species, native to North America and very rare in Europe, gets the name "Oxalis Dillenii Jacq.". This is the "Oxalis stricta L." of present American authors. *O. Navieri* Jord. is a taxonomic synonym.

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Multiple Uses of some Generic Names of Ferns and Fern-allies, Living and Fossil

by
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With the present rate of expansion in the field of botanical nomenclature, many difficulties confront the botanist who has a limited library, in which there may be only a particular genus or family well represented. This circumstance of inadequate reference materials has led to the use, recently as well as in the past, of many generic names of Pteridophytes in the Algae, in the Gymnosperms, in the Angiosperms and in various fossil groups. Their usage in these groups is in no way synonymous with their usage in the Pteridophytes. For this reason the following listing of these generic names may serve as a guide for further usage in the Ferns and Fern-allies. The list is far from complete, and some of the synonymy may need further correction and revision in the light of what specialists have done in their particular groups. No attempt is made to change names or to provide new names for those in which two names appear to be currently valid. Suggestions for conservation are made and should be considered by the proper persons interested in the particular group involved.

The main sources for this article have been Christensen's *Index Filicum* and supplements I-III, Dalla Torre et Harms' *Genera Siphonogamarum*, Hirmer's *Handbuch der Paläobotanik*, and Copeland's *Genera Filicum*, as well as the author's indices. The author wishes to thank Dr. Roland W. Brown, Department of Geology, Smithsonian Institution, for his kind assistance in locating some of the information provided herein.

Those genera which appear to be in use at the present time are in bold type. Where some disposition should be made concerning one or more of the synonymous generic names, an asterisk has been placed in front of the unit. Where the spellings of the generic names seem to be quite similar, they have been included also, as *Anopteris* and *Anopterus*.

1. **Actinopteris** Link, Fil. Spec., 73, 79. 1841. Pteridaceae.
   Actinopteris J. Smith, Bot. Mag. 72 (Comp.): 20. 1846 (Cheilanthes sect.). = Adiantopsis.
   Actinoptera DC., Prodr. 5: 543. 1836. Compositae: Zexmenia La Llave.

*2. *Adenophorus* Gaud., Ann. Sci. Nat. 3: 508. 1824. = Amphoradenium Desv. (Prodr., p. 335. 1827). Polypodiaceae.
   Adenophorus Desv., Journ. de Bot., Paris, 1: 124-125. 1808. Genus Algarum.
   Adenophora Fisch., Mem. Soc. Nat. Moscou 6: 165. 1823. Campanulaceae.

3. **Amphipterum** Presl, Epim. Bot., p. 258 (nomen). 1849; Copel., Philip. Journ. Sci. 64: 68 (subgen.). 1937; 67: 46 (as genus). 1938; Gen. Fil., 35. 1947. Hymenophyllaceae.
   Amphiptera Baker, in Hooker f., Fl. Brit. India 2: 185. 1876. Leguminosae: Mucuna Adans. sect.

4. *Anaxetum* Schott, Gen. Fil., pl. 1. 1834. = Pessopteris Underw. et Maxon, Contr. U. S. Nat. Herb. 10: 485. 1908; Copel., Gen. Fil. 186. 1947.
Anaxeton Gaertn., Fruct. 2: 406. 1791; Cass., Dict. Sci. Nat. 26: 52. 1823; 34: 37. 1825. Compositae.
Anaxeton Schrank, Denkschr. Akad. München 8: 146, 162. 1824. Compositae: Helipterum DC. sect. Euhelipterum Benth.

5. **Anemia** Swartz, Syn. Fil., p. 6, 155. 1806. Anemiaceae.
Anemia Nutt., Ann. Nat. Hist. 1: 136. 1838. Saururaceae: Anemopsis Hook. et Arn.

6. **Anetium** (Kunze) Splitgerber, Tijds. Nat. Ges. 7: 395. 1840. Vittariaceae.
Syn.: Pteridanetium Copel., Gen. Fil., 224. 1947.
Anetium Kunze, unpubl. sect. name under Acrostichum.
Anetia Endl., Gen., p. 923. 1839. Flacourtiaceae: Byrsanthus Guillem.

7. **Annularia** Sternberg, Flora der Vorwelt 1 (fasc. 2): 32. 1825. Calamitaceae.
Annularia Hochst., Flora 24: 670. 1841. Apocynaceae: Voacanga Thou.

*8. **Anopteris** Prantl, in Engler's Jahrb. 3: 414. 1882 (as section of Cryptogramme); in Diels, Nat. Pflanzenfam. 1(4): 288 (genus). 1899; Copel., Gen. Fil., 63. 1947. Pteridaceae.
Anopterus Labill., Nov. Holl. Pl. Spec. 1: 85, t. 112. 1804. Saxifragaceae.

9. *Aquilina* Presl msc. (Ettingsh., Farnkr. 91. 1865). = Pteridium.
Aquilina Bubani, Fl. Pyren. 3: 374. 1901. Ranunculaceae: Aquilegia L.

10. *Argyria* Fee, Gen. Fil. 183. 1850-52. (Ceropteris sect.). = Ceropteris.
Argyra Nor. ex Baill., Adansonia 1: 162. 1860-61. Euphorbiaceae: Croton.

11. *Aristaria* K. Muller, Bot. Zeit. 1854: 545 (Vittaria sect.). = Vittaria.
Aristaria Jungh., in Hoeven et De Vriese, Tijdschr. 7: 296. 1840. Gramineae: Themeda Forsk.

*12. **Arthrostigma** Dawson, Foss. Pl. Dev. and Upper Silur. Form. Canada, Geol. Survey Canada, p. 41, t. 13, f. 151-153. 1871. Arthrostigmataceae: Drepanophycus. This name should be conserved or changed.
Arthrostigma Endl., Gen., p. 337. 1838. Proteaceae: Petrophila R. Br., sect.

13. *Aspidium* Swartz, Schrad. Journ. 1800 (2): 29. 1801. = Dryopteris.
Aspideium Zollik., ex De Candolle, Prodr. 7: 150. 1838. Compositae: Willemetia Neck.

14. **Asterocarpus** Goeppert, Syst. Fil. Foss., 188. 1836. This name should be conserved or changed.
Asterocarpus Reichb., Handb., 261. 1837. Resedaceae: Astrocarpus Neck.
Asterocarpus Eckl. et Zeyh., Enum., 122. 1835. Celastraceae: Pterocelastrus Meissn.
Astrocarpa Dumort., Comment. Bot., 64. 1822. = Astrocarpus.

15. **Asterochlaena** Corda, Beiträge zur Flora der Vorwelt, p. 81. 1845. (Osmundites), Palaeopteridales, Moret, Man. Pal. Veg., 104. 1943.
Asterochlaena Garcke, Bot. Zeitg. 8: 666. 1850. Malvaceae: Pavonia Cav.

16. **Asteropteris** Dawson, Quart. Journ. Geol. Soc. London, vol. 37. 1881. Palaeopteridales, Moret, Man. Pal. Veg., 104. 1943.
Asteropterus Gaertn., Fruct. 2: 460, t. 173. 1791; Post et Kuntze, Lexic. Gen. Phaner., p. 51. 1903. Compositae: Leyssera L.

17. *Balantium* Kaulf., Enum., 228. 1824. Treated by Copeland (Gen. Fil., 48. 1947) as synonym of Dicksonia; Balantium auct. plur. belongs to Culcita Presl (Tent. Pterid., 135. 1836).
Balantium Desv., in Hamilton, Prod. Pl. Ind. Occ., 34. 1825. Rosaceae: Parinarium Aubl.

18. **Belvisia** Mirbel, Hist. Nat. Veg. 5: 111. 1803; Underw., Mem. Torr. Bot. Club 6: 276. 1899; Copel., Gen. Fil., 191. 1947. Polypodiaceae.
Belvisia Desv., Journ. de Bot. 4: 130. 1814. Lecythidaceae: Napoleona Beauv.

19. *Bergera* Schaffner (Fee, 9 mem., p. 30. 1857). = Trichomanes.
Bergera Koenig, ex L., Mant. 2: 555. 1771. Rutaceae: Murraya Koenig.

20. *Bergeria* Presl; Hirmer, Handb. Palaeobot., 225, fig. 259. 1927; Jongsman, Lycopodiales II, Foss. Cat. II. 15: 61. 1929. = Lepidodendron.
Bergeria Koenig, ex Steudel, Nom., ed. 2, 1: 849. 1840. Polygonaceae: Koenigia L.

*21. *Bernouillia* Heer, Fl. Foss. Helv., 88. 1876; Hirmer, Handb. Palaeobot., 591-592. 1927. Marattiaceous affinities.
Bernoullia Oliv., in Hook., Icon. Pl., t. 1169. 1873. Bombacaceae.
Bernoullia Neck., Elem. 2: 97. 1791. Rosaceae: Geum L.

22. **Botryopteris** Renault, Ann. Sci. Nat. VI. 1: 223. 1875. Botryopteridaceae. This name should be conserved or changed.
Botryopteris Presl, Rel. Haenk. 1: 76. 1825. = Helminthostachys.

23. *Bowringia* Hooker, Journ. Bot. 5: 237. 1853. = Brainea.
Bowringia Champ. ex Bentham, in Hook., Kew Journ. 4: 75. 1852. Leguminosae.

*24. **Bucheria** Dorf, Bot. Gaz. 95: 245. 1933. Zosterophyllaceae. This name should be changed or conserved.
Bucheria Heynb., Nom. 2: 80. 1846. Myrtaceae: Thryptomeme Endl.

25. *Calanthera* Thouin, Acad. Sci. Paris, 1783 (not properly published), belongs in Marattia Swartz (Prod. Fl. Ind. Occ., 128. 1788).
Calanthera Nutt. ex Hooker, Kew Journ. 8: 12. 1856. Gramineae: Buchloë Engelm.

26. *Candollea* Mirbel, Hist. Nat. Veg. 5: 86. 1803; Hist. Nat. Pl. 4: 69. 1803. = Pyrrosia Mirbel, Hist. Nat. Veg. 5: 91. 1803; Hist. Nat. Pl. 4: 70. 1803; Ching, Bull. Chinese Bot. Soc. 1: 36-72. 1935.
Candollea Labill., Ann. Mus. Paris 6: 453. 1805; F. Muell., Census, ed. 2: 144. 1889. Stylidiaceae: Stylidium Swartz ex Willd.
Candollea Labill., Nov. Holl. Pl. Spec. 2: 33, t. 176. 1806. Dilleniaceae: Hibbertia sect. Candollea Gilg.
Candollea Baumg., Catal. Horti Bollw., 1810. Ericaceae: Menziesia Smith.
Candollea Gilg, in Engler & Prantl, Pflanzenfam. III. 6: 118. 1893. Dilleniaceae: Hibbertia Andrews sect.

*27. **Cardiopteris** Schimper, Traité de Paléontologie Végétale Paris, 1: 292. 1869. This name should be conserved or changed.
Cardiopteris Wall., Numer. List, n. 8033. 1836? Icacinaceae: Cardiopteryx Wall.

28. *Cardiostegia* Moore, Ind. XC. 1857 (Nephrolepis sect.). = Nephrolepis.
Cardiostegia Presl, Epim. Bot., 249. 1849. Sterculiaceae: Melhania Forsk.

29. *Carpanthus* Raf., N. Y. Med. Repository II. 5: 356. 1808; Journ. de Bot. 1: 221. 1808. Improperly assigned to Salvinia Adanson (Fam. d. Plantes 2: 15. 1763). Belongs in Scrophulariaceae (Gratiola); see Merrill, Amer. Fern Jour. 33: 46-47. 1943.
Carpanthus Muell.-Arg., Fl. Brasil VI. 5: 164. 1881. Rubiaceae: Rudgea Salisb. sect.

30. *Cassebeera* Kaulf., Enum. Fil. 216. 1824. = Doryopteris.
Cassebeeria Dennst., Schlüss. Hort. Malab., 35. 1818. Melastomaceae: Sonerila Roxb.

31. *Catapodium* J. Smith, Cat. Cult. Ferns, 16. 1857. (Phegopteris sect.). = Dryopteris.
Catapodium Link, Hort. Berol. 1: 44. 1827. Gramineae.

32. **Caulopteris** Lindley et Hutton, Fossil Flora of Great Britain, 1: 121, pl. 42. 1831-33.
Caulopterae DC., Prodr. 5: 424. 1836. Compositae: Baccharis L. sect.

33. *Cephalosorium* Moore, Ind. Fil. LXXV. 1857 (Campyloneurum sect.). = Polypodium.
Cephalosorus A. Gray, in Hooker, Kew Journ. 3: 152. 1851. Compositae: Angianthus Wendl.

34. *Chauvinia* Stur, Sitzungsber. K. Akad. d. Wiss. Wien, 84 (1 Abt.): 333. 1881. = Protolepidodendron.
Chauvinia Steud., Synops. Pl. Gramin., 362. 1855. Gramineae: Spartina Schreb.

*35. **Cheilanthes** Swartz, Syn. Fil. 5, 126. 1806. Pteridaceae.
Cheilanthos St. Lag., Ann. Soc. Bot. Lyon 7: 56. 1880. Labiatae.

36. *Chilodium* Presl, Hymenoph., 23. 1843 (Didymoglossum sect.). = Trichomanes et Hymenophyllum.

Chilodia R. Br., Prodr., 507. 1810. Labiatae: Prostanthera Labill. sect. Euprostanthera Benth.

37. *Chlamydia* Moore, Ind. Fil. CIV. 1857. (Amphicosmia sect.). = Hemitelia.
Chlamydia Banks ex Gaertn., Fruct. 1: 71, t. 18. 1788. Liliaceae: Phormium Forst.

*38. **Cladotheca** Halle, Ark. for Bot. 10 (15): 1-10, 1 tf., 2 t. 1911; 17 (1): 13. 1921. Schizaeales (Jurassic): Senftenbergiaceae. This generic name should be changed or conserved for the fossils.
Cladotheca Steud., Synops. Pl. Cyper., 178. 1855. Cyperaceae: Cryptangium.

39. *Clementea* Cav., Descrip. Pl., 553. 1803. = Angiopteris.
Clementea Cav., Anal. Cienc. Nat. 7: 63, t. 47. 1804. Leguminosae: Canavalia DC.

*40. **Coptophyllum** Gardn., Lond. Journ. Bot. 1: 133. 1842. This generic name is considered a synonym under Anemia by Copeland. In a monograph of the Schizaeales by Reed, Coptophyllum appears as a subgenus of the genus Hemianemia (Prantl) Reed (Bol. Soc. Broteriana 21 (2a ser.): 157. (1947) 1948).
Coptophyllum Korth., Nederl. Kruidk. Arch. 2: 161. 1851. Rubiaceae.

41. *Crepidium* Presl, Hymen., 23. 1843 (as sect. of Didymoglossum); Epim. Bot., 258 (as genus). 1849. = Crepidopteris Copel., Philip. Jour. Sci. 67: 57. 1938. = Crepidophyllum Reed, 1948.
Crepidium Blume, Bijdr., 387. 1825. Orchidaceae: Microstylis Nutt.
Crepidium Nutt., Trans. Amer. Phil. Soc., n. s., 7: 435. 1841. Compositae: Crepis L. sect. Eucrepis DC.
Crepidium Tausch, Flora 11: p. 1, Erg.-Bl. 80 pp. 1828. Compositae: Crepis L. sect. Nemauchenes Cass.

42. *Crepidopteris* Copeland, Philip. Jour. Sci. 67: 57. 1938. = Crepidophyllum Reed, 1948.
Crepidopteris Presl, in Sternb., Flora der Vorwelt, 2: 119. 1838. = Danaeopsis.
Crepidopteris Benth., Fl. Brasil. XV. 1: 166. 1859. Leguminosae: Dioclea HBK.

In 1948, Reed (Amer. Fern Jour. 38: 88-89) pointed out that the generic name *Crepidopteris* of Copeland (Philip. Jour. Sci. 67: 57. 1938; Genera Filicum, 39. 1947) was antedated by *Crepidopteris* of Presl (in Sternberg, Fl. der Vorwelt, 2: 119. 1838) for a group of species of fossil ferns, later referred to the genus *Danaeopsis*, and by *Crepidopteris* of Bentham for some species of the family Leguminosae (= *Dioclea* HBK.). Later, Copeland (Amer. Fern Jour. 40: 20. 1950) remarks that Bentham had printed in synonymy, *Crepidopteris brasiliensis* Walp., "a miscitation, obviously accidental", for *Crepidotropis* Walp. (Linnaea 14: 296. 1840). Copeland believes this situation would not invalidate his use of the generic name, *Crepidopteris*. He says nothing of the disposition of Presl's generic name, which also antedates Copeland's use of the name. *Crepidopteris schoenleinii* Sternb. (l.c.) was treated in 1850 by Unger (Gen. et Sp. Pl. Foss., 179) as a synonym of *Pecopteris macrophylla* Brongnairt. Later, species of *Crepidopteris* of Sternberg were transferred to the genus *Danaeopsis*.

Because of Sternberg's use of the name for another group of ferns, even though they are fossils, Reed had proposed that the generic name *Crepidophyllum* be used for the ferns referred to *Crepidopteris* of Copeland. In 1948 Reed transferred five species to the new generic name. There are two more species to be transferred to *Crepidophyllum*.

1. Crepidophyllum **australiense** (Domin) Reed, comb. nov.
Crepidopteris australiensis (Domin) Wakefield, Vict. Nat. 66: 59. 1949; *Trichomanes nanum* var. *australiense* Domin, Bibliotheca Bot., 13. 1913. Australia (Daintree River, NE Queensland).

2. Crepidophyllum **wildii** (Bail.) Reed, comb. nov.
Crepidopteris wildii (Bail.) Wakefield, Vict. Nat. 66: 59. 1949; *Trichomanes wildii* Bailey, Queensland Bot. Bull. No. 4: 19, t. 5a. 1891. Australia (NE).

Until *Crepidopteris* of Copeland is conserved over Sternberg's generic name, then the use of *Crepidophyllum* seems quite just and proper.

43. *Cuspidaria* Fee, 3 mem., pp. 8, 25. 1851; Genera, p. 88, pl. 8A. 1851. = Eschatogramme Trevisan, Atti Ist. Veneto II. 2: 168. 1851; C. Chr., Dansk Bot. Arkiv 6 (3): 34. 1929.

Cuspidaria DC., Bibl. Univ. Geneve 17: 125. 1838; Prodr. 11: 177. 1845. Bignoniaceae.

*44. **Cyathorachis** Ogura, Jour. Fac. Sci., Imp. Univ. Tokyo 1 (3): 368. 1927. Cyatheales (Upper Cretaceous). This generic name should probably be conserved for the fossil group of species.
Cyathorhachis Nees ex Steudel, Synops. Pl. Gramin., p. 403. 1855. Gramineae: Polytoca R. Br.

45. *Cyclopteris* Brongn., Prodr. Hist. Veg. Foss., p. 51. 1818. = Paracyclopteris.
Cycloptera R. Br., Trans. Linn. Soc. 10: 176. 1810. Proteaceae: Grevillea R. Br., sect.
Cycloptera Endl., Enchir., 113. 1841. Orchidaceae: Spiranthes L. C. Rich.
Cycloptera Nutt. ex A. Gray, Amer. Jour. Sci., 2 ser. 15: 319. 1853. Nyctaginaceae: Abronia Juss.

*46. **Cyclostigma** Haughton, Jour. Roy. Dublin Soc. 2: 12-14, t. 14-17. 1859; Ann. and Mag. Nat. Hist. (3) 5: 144. 1860. (Upper Devonian and Lower Carboniferous). Synonyms are: Knorria Heer, 1871; Rhytidodendron Boulay, 1876; Pinakodendron Weiss, 1893. This generic name should be conserved or changed for the fossils.
Cyclostigma Griseb., Gen. et Sp. Gentian., 259. 1839. Gentianaceae: Gentiana L. sect.
Cyclostigma Hochst., ex Endlicher, Gen. Suppl. II: 56. 1842; Flora 27: 828. 1844. Apocynaceae: Voacanga Thou.
Cyclostigma Klotzsch, in Seemann, Bot. Voy. Herald, 104. 1853. Euphorbiaceae: Croton L. sect. Eutropia Muell.-Arg. subsect.
Cyclostigma Phil., Sert. Mendoc. Alt., 39. 1871. Solanaceae: Salpiglossis Ruiz. et Pav. sect. Leptoglossis Wettst.

47. **Danaea** Smith, Mem. Acad. Turin 5: 420. 1792. Danaeaceae.
Danaea Colla, Mem. Accad. Torino 38: 27, t. 28. 1835. Compositae: Senecio L.

48. **Demetria** Zalessky, Bull. Soc. Geol. de France (4). XXX. 6: 459, t. 38, f. 3. 1831. Lycopodiales (Lower Carboniferous). This genus should be conserved for the fossils, or changed.
Demetria Lag., Gen. et Spec. Pl., 30. 1816. Compositae: Grindelia Willd.

49. *Dictyophlebia* Gris., Abh. Ges. Gott. 7: 283, 286. 1857. = Polypodium et Aspidium (Dryopteris).
Dictyophleba Pierre, Bull. Soc. Linn. Paris, n.s., p. 92. 1898. Apocynaceae: Landolphia Beauv.

*50. *Didymochlamys* Moore, Ind. Fil. LV. 1857. (Diplazium sect.). = Diplazium.
Didymochlamys Hook. fil., Icon. Pl., t. 1122. 1872. Rubiaceae.

51. **Dipteris** Reinwaldt, Syll. Pl. 2: 3. 1824. Polypodiaceae.
Diptera Borkh., in Roemer, Neu Magaz. 1: 29. 1794. Saxifragaceae: Saxifraga L.
Dipterix Willd., Sp. Pl. III. 3: 910. 1803. Leguminosae: Dipteryx Schreb.

52. **Doodia** R. Br., Prod. Fl. Nov. Holl. 151. 1810. Blechnaceae.
Doodia Roxb., Hort. Bengal, 99. 1814; Fl. Ind. 3: 365. 1832. Leguminosae: Uraria Desv.

53. *Dryandra* (rigida) Heer, Beitr. Sächs.-Thüring. Braunk., 427, t. 10, f. 15. 1861. = Osmunda lignitum.
Dryandra R. Br., Trans. Linn. Soc. 10: 211, t. 2. 1810. Proteaceae.
Dryandra Thunb., Fl. Japon., p. 13, t. 27. 1784. Euphorbiaceae: Aleurites Forst. sect. Dryandra Muell.-Arg. (in DeCandolle, Prodr. XV. 2: 723. 1866).

*54. **Eichwaldia** Zal., Mem. Com. Geol. Leningrad, n.s., no. 176: 40, pl. 12, f. 3. 1927. Lycopodiales. This generic name should be conserved for the fossils, or changed.
Eichwaldia Ledeb., in Eichwald, Pl. Casp.-Cauc., p. 38, t. 34. 1831. Tamaricaceae: Reaumuria L.

55. *Eupodium* J. Smith, in Hook., Gen. Fil., t. 118. 1842. = Marattia.
Eupodia Raf., Fl. Tellur. 3: 29. 1836. Gentianaceae: Chironia L.

56. *Eupteris* Newman, The Phytologist 2: 278. 1845. = Pteridium.
Eupteron Miq., Fl. Ind. Bat. 1: 762. 1855. Araliaceae: Polyscias Forst.

57. **Fadyenia** Hook., in Hook. et Bauer, Genera, pl. 53 B. 1840. Aspidiaceae.
Faydenia Endl., Gen. Suppl. II. 30. 1842. Cornaceae: Garrya Dougl. ex Lindley.

58. **Feea** Bory, Dict. Class. d'Hist. Nat. 6: 446. 1824. Hymenophyllaceae.
Feea Kuntze, Rev. Gen. Pl. 1: 338. 1891; Post et Kuntze, Lexic. Gen. Phaner., p. 284. 1903. Compositae: Selloa HBK.

59. *Flabellaria* (viminea) Phillips, Geol. Yorkshire 1: 148, 154, t. 10, f. 12. 1829. = Isoëtites murrayana.
Flabellaria Cav., Disc. IX. p. 436, t. 264. 1790. Malpighiaceae.

*60. **Forbesia** Johnson, Dublin Sci. Proc. Roy. Soc. 13: ... 1912. (Sphenopteris). This name should be conserved for the fossils, or changed.
Forbesia Eckl., Verz. Pflanzensamml., p. 4. 1827. Amaryllidaceae: Curculigo Gaertn.

*61. *Fourniera* Bommer, Bull. Soc. Fr. 20: XIX. 1873; Ann. Sci. Nat. V. 18: 349. 1873. = Cyathea Smith.
Fourniera Schribner, U. S. Dept. Agric. Agrostol., Bull. 4: 7. 1897. Gramineae. This genus should be conserved.

62. *Furcaria* Desv., Prodr., p. 292. 1827. = Ceratopteris Brongn.
Furcaria DC.; Kostel, Allg. Med.-Pharm. Fl. 5: 1856. 1836. Malvaceae: Hibiscus L. sect. Furcaria DC. (Prodr. 1: 448. 1824).
Furcaria Boiv. ex Baillon, Etud. gen. Euphorb., p. 356. 1858. Euphorbiaceae: Croton L. sect. Eluteria Griseb.

63. *Galeoglossa* Presl, Epim. Bot., 132. 1849. = Pyrrosia Mirbel.
Galeoglossum A. Rich. et Gal., Ann. Sci. Nat. III. 3: 31. 1845. Orchidaceae: Prescottia Lindl.

64. *Glockeria* Göpp., Syst. Fil. Foss., Nova Acta A. N. C. 17 (Suppl.): 379. (1845). = Pecopteris.
Glockeria Nees, in DeCandolle, Prodr. 11: 728. 1847; Pritz., Icon. Index 2: 134. 1855. Acanthaceae: Hansteinia Oerst.

*65. *Glossopteris* Raf., Jour. Phys. 89: 262. 1819. = Phyllitis.
Glossopteris Brongn., Prodr., p. 54 (partim). 1828; Histoire 1: 225. 1830. Probably near Sagenopteris. This generic name should be conserved for the fossils.

66. *Gymnocarpium* Newman, The Phytologist 4: 371. 1851. = Lastrea et Currania.
Gymnocarpos Forsk., Fl. Aegypt.-Arab., 65. 1775. Caryophyllaceae.
Gymnocarpon Pers., Synops. 1: 262. 1805. Caryophyllaceae: Gymnocarpos.
Gymnocarpum DC., Prodr. III: 369. 1828. Caryophyllaceae: Gymnocarpos.
Gymnocarpus Thou., ex Baillon, Etud. gen. Euphorb., p. 595. 1858. Euphorbiaceae: Uapaca Baill.

67. *Gymnotheca* Presl, Tent. Pterid. Suppl., p. 12. 1845. Marattia.
Gymnotheca Decne., Ann. Sci. Nat. III. 3: 100, t. 5. 1845. Saururaceae: Houttuyia Thunb.

*68. **Haplostigma** Seward, Quart. Journ. Geol. Soc. London, 86 (2): 365, pl. 23, 24, text-fig. 1. 1932. Drepanophycaceae (Lycopod.). This genus needs to be conserved for the fossils.
Haplostigma F. Muell., Fragm. 8: 100. 1873. Restionaceae: Loxocarya R. Br.

*69. **Helenia** Zalessky, Bull. Soc. Geol. de France (4). XXX. 8: 739. 1930; Bull. Acad. des Sci. de l'USSR., pp. 558-562. 1931. Lycopodiales (Carboniferous). This name needs to be conserved, or changed if Helenium L. stands.
Helenia L., Gen. Pl., ed. 1: 260. 1737. Compositae: Helenium L.
Helenium (L., Syst., ed. 1. 1735) Adans., Fam. II: 125. 1763; Kuntze, Rev. Gen. Pl. 1: 342. 1891. Compositae: Inula L.
Helenium L., Sp. Pl., ed. 1: 886. 1753. Compositae.

70. *Hemistegia* Presl, Abh. Bohm. Ges. V. 5: 354. 1848. = Cnemidaria Presl.
Hemistegia Raf., Fl. Tellur. 3: 89. 1836. Labiatae: Salvia L.

71. *Heteroneuron* Fee, Hist. Acrost., p. 20 (Heteronervon), 91, pl. 54-57. 1845. = Bolbitis Schott.
Heteroneuron Hook. fil., in Benth. et Hook. fil., Gen. 1: 168. 1867. Melastomataceae: Loreya DC.

72. *Heteropteris* Fee, Dix. Session Cong. Sci. France 1: 178. 1843; Diels, Nat. Pfl.-fam. 1 (4): 305, f. 161 E. 1899. = Paltonium Presl.
Heteropteris Presl; Ettingshausen, Farnkr., 96. 1865. = Pteris (linearata).
Heteropteris Fee, Crypt. Vasc. Bras. 1: 123. 1869. = Doryopteris.

Heteropteris Potonie, Abh. k. Preuss. Geol. Landesanst. (N.F.), 9 (2): 44. 1893. = Alloiopteris Pot.

Heteropteris HBK., Nov. Gen. et Spec. 5: 163. 1821. Malpighiaceae: Heteropteryx sect. Euheteropteryx Griseb.

Heteropteris sect. Anomalopteris DC., Prodr. 1: 592. 1824. Malpighiaceae: Acridocarpus Guill. et Perr.

*73. *Hewardia* J. Smith, Jour. Bot. 3: 432, pl. 16-17. 1841; Hook. et Bauer, Genera, pl. 89. = Adiantum L.

Hewardia Hook. fil., in Hook., Icon. Pl. 9: t. 858. 1852. Liliaceae. This generic name is antedated by Hewardia of J. Smith and probably needs to be conserved.

74. *Hornea* Kidston et Lang, Trans. Roy. Soc. Edinb. 52 (24): 616. 1920. = Horneophyton Koidzumi, Acta Phytotax. et Geobot. 8: 222. 1939. Also Horneaceae was changed to Horneophytaceae by Koidzumi, (l.c.).

Hornea Baker, Fl. Mauritius, p. 59. 1877. Sapindaceae.

75. *Hyalolepis* Kunze, Linnaea 23: 258. 1850. = Belvisia Mirbel.

Hyalolepis DC., Prodr. 6: 149. 1837. Compositae: Myriocephalus Benth.

76. *Hymenolepis* Kaulf., Enum., 146. 1824; C. Chr., Dansk Bot. Arkiv 6 (3): 142. 1929. This generic name is considered a synonym of Belvisia Mirbel by Copeland (Gen. Fil., 191. 1947).

Hymenolepis Cassini, Bull. Soc. Philom. Paris, p. 138. 1817; Dict. Sci. Nat. 22: 315 pp. 1821. Compositae: Athanasia L. sect. Hymenolepis Harv.

Hymenolepis Cassini, Dict. Sci. Nat. 33: 61. 1824. Compositae: Gonospermum Less.

Hymenolepis Harv., in Harvey et Sonder, Fl. Capens. 3: 188. 1865. Compositae: Athanasia L. sect.

*77. *Hymenostegia* J. Smith, Lond. Jour. Bot. 1: 666. 1842 (Alsophila sect.). = Alsophila.

Hymenostegia Benth., in Benth. & Hook. fil., Genera 1: 587 (sect. Cynometrae). 1865. = Hymenostegia Harms.

Hymenostegia Bunge, Mem. Acad. St. Petersbourg 7 ser. 11 (16): 57. 1868. Leguminosae: Astragulus L. sect. Calycophysa Bunge.

Hymenostegia Harms, in Engl. & Prantl, Pfl.-fam. Nachtr., p. 193. 1897. Leguminosae. This name should be conserved.

*78. **Hymenotheca** Potonie, Jahrb. k. Preuss. Geol. Landes. 1889: 21, t. 3. 1892. Mid Upper Carboniferous. This name should be conserved.

Hymenotheca Salisb., Trans Hortic. Soc. 1: 268. 1812. Hydrocharitaceae: Ottelia Pers.

Hymenotheca F. Muell., Fragm. 1: 201. 1859. Phytolaccaceae: Gyrostemon Desf. sect.

*79. **Hypodematium** Kunze, Flora 16: 690. 1833; Farrnkrauter 1: 41, pl. 21. 1840; Copel., Gen. Fil., p. 108. 1947. Aspidiaceae. This name should be conserved.

Hypodematium A. Rich., Tent. Fl. Abyss. 1: 348. 1847. Rubiaceae. This generic name needs to be changed.

Hypodematium A. Rich., Tent. Fl. Abyss. 2: 286, t. 83. 1851. Orchidaceae: Lissochilus R. Br.

80. **Hypolepis** Bernhardi, in Schrader's Neues Journ. 1: 34. 1806. Pteridaceae.

Hypolepis Pers., Synops. 2: 598. 1807. Rafflesiaceae: Cytinus L. sect. Hypolepis Baker f.

Hypolepis Beauv., in Lestiboudois, Essai Fam. Cyper., p. 33. 1819. Cyperaceae: Ficinia Schrad.

Hypolepis Baker f., Jour. Linn. Soc. 24: 465. 1901. Rafflesiaceae: Cytinus L. sect.

81. **Isoëtes** L., Sp. Pl., p. 1100. 1753. Isoëtaceae.

Isoëtes Weigel, Obs. Bot., p. 36, t. 2, f. 7. 1772. Juncaceae: Juncus L.

*82. **Isoëtopsis** Saporta, Ann. Sci. Nat. Bot. VII. 7: 28. 1888. A genus of fossil ferns from the Oligocene of France. This generic name needs to be changed.

Isoëtopsis Turcz., Bull. Soc. Nat. Moscou 24: 1, 174. 1851; Benth., Fl. Austral. 3: 556. 1866. Compositae.

83. **Isoloma** J. Smith, Jour. Bot. 3: 414. 1841. Pteridaceae.

Isoloma J. Smith, in Hooker's Genera, pl. 102. 1842. = Nephrolepis Schott.

Isoloma Basiner, Bull. Acad. St. Petersbourg 4: 310. 1845; Mem. Sav. Etrang. Acad. St. Petersbourg 6: 49. 1851. Leguminosae: Hedysarum L. subgen.

Isoloma Benth., Pl. Hartweg., p. 230 (sect. Gesnerae). 1846. Gesneriaceae: Kohleria Regel.

Isoloma Decne., Revue Hortic. III. 2: 465. 1848. Gesneriaceae: Kohleria Regel.

Isoloma Fritsch, in Engl. & Prantl, Pfl.-fam. IV. 3b: 178. 1894. Gesneriaceae: Kohleria Regel sect.

84. *Jenkinsia* Hook., in Hook. et Bauer, Genera, pl. 75 B. 1840. = Bolbitis Schott.

Jenkinsia Griff., Calcutta Jour. Nat. Hist. 4: 231, t. 12. 1844. Icacinaceae: Miquelia Meissn.

Jenkinsia Wall., ex Voigt, Hort. Suburb. Calcut., p. 544. 1845. Asclepidiaceae: Myriopteron Griff.

85. *Kaulfussia* Blume, Enum., p. 260. 1828. = Christensenia Maxon.

Kaulfussia Dennst., Schluss. Hort. Malab., p. 30. 1818. Polygalaceae: Xanthophyllum Roxb.

Kaulfussia Nees, Horae Phys. Berol., p. 56, t. 11. 1820. Compositae: Charieis Cass.

*86. **Klukia** Raciborski, Engl. Bot. Jahrb. 13: 5. 1890 (non 1891, auct.). Klukiaceae. This generic name is well known as a fossil genus, and it should be conserved for this group.

Klukia Andrz. in DeCandolle, Syst. II. 1821. Cruciferae: Malcolmia R. Br.

*87. *Knorria* Heer, Flora Foss. Arct. II. Flora d. Bäreninsel., p. 41, t. 10, f. 4. 1871. = Cyclostigma.

Knorria Sternb., Flora der Vorwelt, 1 (fasc. 4): XXXVII. 1825. Lycopodiales. This generic name needs to be conserved.

Knorrea Moc. et Sesse, ex DeCandolle, Prodr. 2: 80. 1825. Burseraceae: Tetragastris Gaertn.

*88. **Lennea** Kr. et Weyl., Senskenbergiana 14: 189. 1932. (Devonian). This generic name for the fossils must be changed.

Lennea Klotzsch, in Link, Klotzsch et Otto, Icon. Pl. Rar. 2: 65, t. 26. 1842. Leguminosae.

89. **Lepidocarpon** Scott, Phil. Trans. Roy. Soc. 194: 291. 1901. Lepidospermales.

Lepidocarpus Adans., Fam. 2: 284. 1763. Proteaceae: Protea L.

Lepidocarpa Korth., Nederl. Kruidk. Arch. 3: 385. 1855. Rosaceae: Parinarium Aubl.

*90. **Lepidophyllum** Brongn., Dict. Sci. Nat. 57 (Prodr.): 93 (87). 1828. Lepidodendraceae. This generic name must be changed.

Lepidophyllum Cassini, Bull. Soc. Philom., 199. 1816. Compositae.

91. *Leptophyllum* Blume, Pl. Javae, Fil. Suppl., t. 95-96. ..... (Olfersia sect.). = Stenochlaena.

Leptophyllum Ehrh., Beitr. IV: 147. 1789. Caryophyllaceae (Alsine).

92. *Leptopleuria* Presl, Tent. Pterid., p. 136, pl. 5, f. 9-11. 1836. = Nephrolepis Schott.

Leptopleura Jaub. et Spach, Illust. Pl. Orient. 1: 11. 1842. Caryophyllaceae: Tunica Scop. sect.

Leptopleura Casp., in Engl. & Prantl, Pfl.-fam. III. 2: 9. 1888. Nymphaeaceae: Nymphaea L. sect.

93. **Leptopteris** Presl, Suppl. Tent. Pterid., p. 70. 1845. Osmundaceae.

Leptopteris Blume, Mus. Bot. Lugd.-Batav. 1: 249, t. 34. 1849. Loganiaceae: Gelsemium Juss.

94. **Llavea** Lagasca, Gen. et Sp., p. 33. 1816. Pteridaceae.

Llavea Liebm., Kjoebenhavn Vid. Meddel., 95. 1853. Fam.? with 2 species in Mexico; Dalla Torre et Harms, Gen. Siphonogam., p. 585. 1900-07. Gen. Incert. sedis.

Llavea Planch., ex Pfeiffer, Nom. II. 1: 140. 1874. Sabiaceae: Meliosma Blume.

95. *Lomaria* Willd., Mag. Ges. Naturf. Berlin 3: 160. 1809; Sp. Pl. 5: 289. 1810. = Blechnum L.

Lomaria Kunze, Linnaea, 10: 506. 1836. Cycadaceae: Stangeria Th. Moore in Hooker.

96. *Lonchitis* L., Sp. Pl., p. 1078. 1753. = Pteris L., Sp. Pl., p. 1073. 1753.

Lonchitis Burbani, Fl. Pyren. 4: 50. 1901. Orchidaceae: Serapias L.

97. *Lopholepis* J. Smith, in Hook. et Bauer, Genera, pl. 51 (as sect.). 1840; Lond. Jour. Bot. 1: 195. 1842. = Microgramma Presl.

Lopholepis Decne., Arch. Mus. Paris 1: 147. 1839. Gramineae.

98. **Luerssenia** Kuhn, Bot. Centralblatt 11: 77. 1882. Aspidiaceae.
Luerssenia Kuntze, Rev. Gen. Pl. 1: 268. 1891. Umbelliferae: Cuminum L.

99. **Lycopodium** L., Sp. Pl. 1: 1100. 1753. Lycopodiaceae.
Lycopodium Banks et Soland., ex Carriere, Conif., p. 489. 1855. Taxaceae: Dacrydium Soland. ex Forster f.

*100. **Macrostachys** Schimper, Pal. Veg. 1: 332. 1869. Equisetales foss. This name should be conserved for the fossils.
Macrostachya Benth., Fl. Austral. VII: 109. 1878. Liliaceae: Lomandra Labill. sect.
Macrostachys Hochst., ex A. Rich., Tent. Fl. Abyss. 2: 408. (in nota). 1851. Gramineae: Chloris Swartz.

101. *Macrostoma* Griffith, Asiatic Researches 19: 110. 1836; Ic. Plant. Asiat. 2: t. 137. 1849. = Christensenia.
Macrostomum Benth. et Hook f., Gen. III: 499. 1883. Orchidaceae: Aporum Blume.

102. *Marantoidea* Fr. Jaeger, Pflanzenverst., p. 28, t. 5, f. 5. 1827. (Keuper). = Para-Taenioperis.
Marantoides A. DC., in DeCandolle, Prodr. 8: 137 (sect. Ardisiae), 1844. Myrsinaceae: Labisia Lindl.
Marantodes Post et Kuntze, Lexic. Gen. Phaner., p. 351. 1903. Myrsinaceae: Labisia Lindl.

103. *Megalastrum* J. Smith, Hist. Fil. 216. 1875. (Lastrea sect.). = Lastrea vel Dryopteris.
Megalastrum A. Gray, Pl. Wright. 2: 75. 1853. Compositae: Aster L. sect.

104. *Mertensia* Willd., Vet. Acad. Nya Handl., p. 163. 1804. = Sticherus Presl.
Mertensia Roth, Catal. Bot. 1: 34. 1797. Boraginaceae.
Mertensia HBK., Nov. Gen. et Spec. 2: 30. 1817. Ulmaceae: Celtis L. subgen. Momisia Planch. in DeCandolle.

105. **Mesonevron** Unger, Denkschr. Akad. Wiss. Wien 11: 172. 1856. Devonian. Sometimes spelled Mesoneuron (Read et Campbell, Amer. Midl. Nat. 21: 443. 1939).
Mesoneuris A. Gray, Proc. Amer. Acad. 8: 661. 1873. Compositae: Cacalia L. sect.

106. *Microchlaena* Ching, Bull. Fan Mem. Inst. Biol. 8 (5): 322. 1938. = Dryopteris Adans.
Microchlaena Wight et Arn., Prodr. Pl. Pen. Ind. Or. 1: 70. 1834. Sterculiaceae: Eriolaena DC.
Microchlaena Post et Kuntze, Lexic. Gen. Phaner., p. 364. 1903. Gramineae: Microlaena R. Br.

*107. **Microlepia** Presl, Tent. Pterid., 124. 1836. Pteridaceae.
Microlepis Miq., Comm. Phytogr. 2: 71. 1839. Melastomataceae.
Microlepis Schrad. ex Nees, Fl. Brasil II. 1: 159. 1842. Cyperaceae: Cryptangium Schrad.

108. *Micropodium* Mett., Ann. Mus. Lugd. Bat. 2: 232. 1866. = Asplenium.
Micropodium Reichb., Consp., p. 135. 1828. Cruciferae: Brassica.

109. *Microstegia* Presl, Epim. Bot., 90. 1849. = Athyrium.
Microstegium Nees, in Lindley, Nat. Syst., ed. 2, p. 447. 1836. Gramineae: Pollinia Trin.

110. *Milleria* Lang, Trans. Roy. Soc. Edinb. 54 (III, 21): 785. 1926. = Protopteridium.
Milleria L., Sp. Pl., ed. 1, p. 919. 1753. Compositae.

111. **Mohria** Swartz, Syn. Fil., p. XIII, 5, 159. 1806. Mohriaceae.
Mohria Britton, Garden and Forest 6: 434 (Oct. 18). 1893. Styracaceae: Halesia L.

112. *Monochlaena* Gaud. in Freycinet, Voyage, p. 340. 1827. = Didymochlaena Desv.
Monochlaena Cass., Dict. Sci. Nat., 50: 496. 1827. Compositae: Eriocephalus L.

113. *Myriopteris* Fee, Gen. Fil., p. 148. 1850-52. = Cheilanthes.
Myriopteron Griff., Calcutta Jour. Nat. Hist. 4: 385. 1844. Asclepidaceae.

114. **Nathorstia** Heer, Handl. Kgl. Sv. Vet. Akad. 18 (2): 5. 1880. Marattiales.
Nathorstia Seward, Brit. Mus. Nat. Hist. (Cat. Mes. Pl. Wealden Fl., pt. 1), p. 145. 1894. = Gleichenites cycadina Schenk.

115. *Neurophyllum* Presl, Hymen., p. 18, pl. 4C. 1843. = Trichomanes.
Neurophyllum Torr. et Gray, Fl. North Amer. 1: 612. 1840. Umbelliferae: Tiedemannia DC.

116. *Neuropteris* Desv., Prodr. 292. 1827. = Saccoloma.
Neuropteris Brongn., Hist. Veg. Foss. 1: 52. 1828. = Para-Neuropteris Hirmer, Palaeontographica 84 B: 154-269. 1940.

117. *Odontoloma* J. Smith, Jour. Bot. 3: 415 (nomen). 1841; Hooker, Genera, pl. 114 B. 1842; Lond. Jour. Bot. 1: 424. 1842. = Lindsaea Dryand. apud. Smith.
Odontoloma HBK., Nov. Gen. et Spec., 4: 43, t. 319. 1820. Compositae: Oliganthes Cass.

118. *Odontopteris* Bernh., in Schrader's Jour. 1800 (2): 127. 1801. = Lygodium.
Odontoptera Cass., Dict. Sci. Nat. 35: 386. 1825. Compositae: Arctotis L.
Odontopteris Brongn., Prodr. Hist. Veg. Foss. 1: 60. 1828. = Para-Odontopteris.

*119. **Oligocarpia** Goeppert, Gatt. des Foss. Pflanz. Lief., i, ii, p. 3. 1841; Darrah, Bot. Mus. Leafl. Harv. Univ. 5 (8): 146. 1938. Gleicheniaceae.
Oligocarpus Less., Synops. Compos., p. 90. 1832. Compositae.
Oligocarpa Regel et Schmalh., in Regel, Pl. Nov. Fedtschenko, p. 24. 1882. Rosaceae: Geum L. sect.

120. **Onychium** Kaulfuss, Jahrb. d. Pharm., p. 45. 1820; Enum., p. 144. 1824. Pteridaceae.
Onychium Reinwardt, Sylloge Pl. 2: 2. 1824. = Lecanopteris.
Onychium Blume, Bijdr., p. 323. 1825. Orchidaceae: Dendrobium Sw.

121. *Otopteris* M'Coy, Ann. et Mag. Nat. Hist. 20: 148, t. 9, f. 2. 1847. = Adiantites Goepp. = Cyclopteris Unger.
Otoptera DC., Prodr. 2: 240. 1825. Leguminosae.

122. *Oxygonium* Presl, Tent. Pterid. 117. 1836. = Diplazium.
Oxygonum Burch, Trav. 1: 548. 1822. Polygonaceae.

123. *Pachyderris* J. Smith msc. (Moore, CXLVI. 1857). = Dryopteris (pedata).
Pachyderis DC., Prodr. 5: 360. 1836. Compositae: Pteronia L. sect.
Pachyderis Cass., Dict. Sci. Nat. 56: 170. 1828; 60: 581. 1830. Compositae: Pteronia L. sect. Pachyderis DC.

124. *Pachyglossa* Christ, Mon. Elaph., p. 20. 1899. (Elaphoglossum sect.). = Elaphoglossum.
Pachyglossum Decne., Ann. Sci. Nat., 2 ser., 9: 345 (in obs.). 1838. Asclepidaceae: Oxypetalum R. Br.

125. *Pachyloma* v. d. Bosch, Eerste Bijdrage, p. 318. 1861. = Craspedophyllum (Presl) Copel., Philip. Jour. Sci. 67: 27. 1938.
Pachyloma DC., Prodr. 3: 120. 1828. Melastomataceae.
Pachyloma Spach., Hist. Nat. Veg. Phaner. 7: 212 (sect. Ranunculi). 1839. Ranunculaceae: Ranunculus sect. Butyranthus Prantl.

126. *Pachyphyllum* Les., Boston Jour. Nat. Hist. 6: 125. 1838. = Aphlebia Presl.
Pachyphyllum HBK., Nov. Gen. et Spec. 1: 338, t. 77. 1815. Orchidaceae.
Pachyphyllum Pierre, Fl. Forest Cochinchine, fasc. VI: p. XX. 1883. Guttiferae: Garcinia L. sect.

127. *Pachypleuria* Presl, Epim. Bot., p. 98. 1849 = Humata.
Pachypleura Jaub. et Spach., Illustr. Pl. Orient. 1: 11. 1842. Caryophyllaceae: Tunica Scop. sect.
Pachypleurum Drude, in Engler & Prantl, Pfl.-fam. III. 8: 212. 1898. Umbelliferae: Ligustricum L. subgen.

128. **Pachypteris** Brongn., Prodr. Hist. Veg. Foss. 1: 49. 1828. (Jurassic).
Pachypteris Kar. et Kir., Bull. Soc. Nat. Moscou 15 (1): 159. 1842. Cruciferae: Pachypterygium Bunge.

129. *Palma* Filix Adanson, Fam. des Plantes 2: 21. 1763. = ?
Palma Plum. ex Miller, Gard. Dict., ed. 6. 1752. Palmaceae.

130. *Panicularia* Colla, Mem. Acad. Torino 39: 33, pl. 64. 1836. = Thyrsopteris Kunze.
Panicularia Fabr., Enum. Pl. Horti Helmstad., ed. 2: 373. 1763; Kuntze, Rev. Gen. Pl. 2: 782. 1891. Gramineae: Glyceria.

131. **Pellaea** Link, Fil. Hort. Berol., p. 59. 1841. Pteridaceae.
Pellea Andre, Illustr. Hortic. 27: 177. 1880. Urticaceae: Pellionia Gaudich.

*132. **Pelletieria** Seward, Quart. Jour. Geol. Soc. Lond. 69: 91. 1913. Schizaeales: Acrostichopteridaceae Reed.
Pelletiera A. St.-Hil., Mem. Mus. Paris 9: 365. 1822. Primulaceae.

133. *Peripteris* Raf., Jour. Phys. 89: 262. 1819. = Pteris.
Periptera DC., Prodr. 1: 459. 1824; Rose, Contr. U.S. Nat. Herb. 5: 173. 1899. Malvaceae: Anoda Cav.
Periptera K. Schum., in Engler & Prantl, Pfl.-fam. Nachtr. p. 239. 1897. Malvaceae: Anoda Cav. sect.

134. **Phyllotheca** Brongn., Prodr., p. 152, 175. 1828. Palaeozoic and Mesozoic.
Phyllotheca Nutt., ex Moquin, in DeCandolle, Prodr. XIII. 2: 98. 1849. Chenopodiaceae: Atriplex L. sect.

135. *Platyloma* J. Smith, Jour. Bot. 4: 160. 1841. = Pellaea.
Platyloma Benth., in DeCandolle, Prodr. VII. 2: 645. 1839. Ericaceae: Erica L. subgen. Stellanthe Benth. sect.

136. **Poecilitostachys** M. Fliche, Compt. Rend. 148: 259. 1909. Lycopodiales (Red Sandstone).
Poecilostachys Hackel, Sitzber. Akad. Wien 89: 131. 1884. Gramineae.

137. *Polypodiopsis* Copeland, Gen. Fil., p. 210. 1947. = Polypodiopteris Reed, Amer. Fern Jour. 38: 87. 1948.
Polypodiopsis Carr., Conif., ed. 2: 710. 1867. Taxaceae.

138. **Polypodium** L., Sp. Pl., p. 1082. 1753; C. Chr., Dansk Bot. Arkiv 5 (22). 1928. Polypodiaceae.
Polypodium Burm. f., Fl. Ind., p. 223, t. 67, f. 1. 1768. Proteaceae: Synaphea R. Br.

139. **Polystichum** Roth, Röm. Arch. 2 (1): 106. 1799; Tent. Fl. Germ. 3: 69. 1800. Aspidiaceae.
Polystichum van Tiegh., Bull. Soc. Bot. Fr. 43: 184. 1896. Loranthaceae: Phorodendron Nutt. sect. Pluriseriales Engl.

140. *Preslia* Opiz (see: Milde, Fil. Eur. et Atl., p. 164. 1867). = Woodsia.
Preslia Opiz., Naturaliensammler, n. 8: 86. 1824; Flora 7: 322. 1824. Labiatae.
Preslea Spreng., Syst. IV. cur. post., p. 338. 1827. Boraginaceae: Heliotropium L.

141. *Pteroneuron* Fee, Genera, p. 320, pl. 25 B, f. 1. 1850-52. = Humata Cav.
Pteroneurum DC., Prodr. 1: 150. 1824. Cruciferae: Cardamine L. sect.
Pteroneuron Meissn., Gen., p. 10. 1837. Cruciferae: Cardamine L. sect. Pteroneurum.

142. *Ptilophyllum* v. d. Bosch, Ver. Akad. Vet. Amsterdam 11: 321. 1861. = Trichomanes.
Ptilophyllum Nutt., Gen. Amer. 2: 211. 1818. Halorrhagidaceae: Myriophyllum sect. Tessaronia.
Ptilophyllum Reichb., Nom., p. 169. 1841. Halarrhagidaceae: Myriophyllum.

143. **Ptychocarpus** Weiss, Fossile Flora der jüngsten Steinkohlenformation und des Rotliegenden im Saar-Rhein-Gebiete, p. 94, t. 11, f. 2. 1869. Bonn. Related to Christensenia in Marattiales.
Ptychocarpa Spach., Hist. Nat. Veg. Phaner. 10: 402. 1841. Proteaceae: Grevillea R. Br., sect. Ptychocarpa R. Br. (1810).

144. *Ptychophyllum* Presl, Hymen., p. 28, pl. 11 E. 1843. = Meringium Presl, Hymen., p. 24, pl. 8 B. 1843.
Ptychophyllum A. Br., Index Sem. Horti Berol., App. 18. 1855. Gramineae: Panicum L. sect.

145. *Pyxidaria* Gleditsch, Syst. Plant., p. 291. 1764. = Trichomanes.
Pyxidaria Ascher. et Kanitz, Catal. Cormophyt. etc., Serbiae etc., p. 60. 1877. (Melleklet a Magyar Noven, Lapokhoz I. 1877); Kuntze, Rev. Gen. Pl. 2: 464. 1891. Scrophulariaceae: Linderia All.

146. *Ramondia* Mirbel, Bull. Soc. Philom. 2: 179. 1801. = Lygodium.
Ramondia L. C. Richard, in Persoon, Synops. 1: 216 (Ramonda). 1805. Gesneriaceae.

147. *Reussia* Presl, in Sternberg, Flora der Vorwelt, 2: 125. 1838. Matoniaceae: Laccopteris Presl.
Reussia Dennst., Schluss. Hort. Malab., p. 33. 1818. Rubiaceae: Paederia L.
Reussia Endl., Gen., p. 139. 1836. Pontederiaceae.

*148. **Rhodea** Presl in Sternb., Vers. einer Geog.-bot. Darst. der Flora der Vorwelt 2: 109. 1838. Hymenophyllaceae.
Rhodea Presl in Sternberg, Die Culm-Flora, Abh. k.-k. Geol. Reichsanst. Wien 8: 33. 1875-77.
Rhodea Endl., Gen., p. 155. 1837. Liliaceae: Rohdea Roth.
Rhodia L., Syst., ed. 1. 1753. Crassulaceae: Sedum L.

149. **Rhynia** Kidston et Lang, Trans. Roy. Soc. Edinb. 51 (24): 761-784, t. 1-10. 1917. Rhyniaceae.
Rhynea Scop., Introd., p. 262. 1777. Guttiferae: Mesua L.
Rhynea DC., Prodr. VI: 154. 1837; in Delessert, Icon. sel IV: t. 52. 1839. Compositae: Cassinia R. Br.

150. *Riedlea* Mirbel, Hist. Nat. des Veg. 5: 71. 1803. = Onoclea L.
Riedlea Vent., Mem. Instit. Paris 1: 2. 1807. Bombacaceae: Melochia L. sect. Riedleia Griseb.

151. *Ripidium* Bernh., in Schrader's Jour., p. 127. 1801. = Schizaea Smith (1793), as the genus Schizaea is presented by Copeland (Gen. Fil., 23. 1947).
Ripidium Trin., Fund. Agrost., p. 169. 1820. Gramineae: Erianthus L. C. Rich.

152. *Salisburia* binervata Lesq., Amer. Philos. Soc. Trans. 13: 412. 1869. = Lygodium.
Salisburia Smith, Trans. Linn. Soc. 3: 330. 1797. Ginkgoaceae: Ginkgo L.
Salisburya Link, Enum. II: 402. 1822. Ginkgoaceae: Ginkgo L.

*153. **Schaffneria** Fee, 7 mem., p. 56. 1857. Aspleniaceae, Copel., Gen. Fil., 171. 1947.
Schaffnera Benth., Jour. Linn. Soc. 19: 63. 1881. Gramineae.
Schaffnera Schultz, Bip., Flora 24: 1, Intell. 42. 1841. Compositae: Dicoma Cass. sect. Eudicoma DC. Also spelled Schaeffnera Benth. et Hook. fil., Gen. 2: 492. 1873.

*154. **Schizopteris** Brongn., Hist. Veg. Foss., 1: 383. 1828-44.
Schizopteris Hilldebrand msc. (Hook. et Baker, Syn., p. 475. 1874). = Schizostege.
Schizopteris adnascens Lindl. et Hutt., Fossil Flora 1: 58. 1834. = Senftenbergia plumosa.
Schizopteris Griseb., Fl. Brasil XII. 1: 87. 1858. Malpighiaceae: Tetrapteryx Cav. sect. Schizopteryx.
Schizoptera Turcz., Bull. Soc. Nat. Moscou 24: 1, 181 (Schizopsera). 1851. Compositae.

155. *Scleropteris* Saporta, Paleontologie Française, 2 ser., Veg. Pl. Jurassiques, 1: 364. 1873. = Pachypteris.
Scleropteris Scheidw., in Otto et Dietrich, Allg. Gartenzeitg. 7: 407. 1839. Orchidaceae: Cirrhaea Lindl.

156. **Senftenbergia** Corda, Beiträge zur Flora der Vorwelt, p. 91. 1845. Schizaeales: Senftenbergiaceae Reed.
Senftenbergia Klotzsch et Karst., ex Eichler, in DeCandolle, Prodr. 17: 140. 1873. Balanophoraceae: Langsdorffia Mart.

*157. **Sigillaria** Brongn., Mem. Mus. Hist. Nat. Paris 8: 233, t. 12, f. 4. 1822. Sigillariaceae (Carboniferous). This name should be conserved.
Sigillaria Raf., Jour. de Phys. 89: 261. 1819. Liliaceae Smilacina Desf.

*158. **Sparganum** Unger, Denkschr. Akad. Wiss. Wien 11: 167. 1856. (Devonian).
Sparganium L., Sp. Pl., ed. 1: 971. 1753. Sparganiaceae.
Sparganion Adans., Fam. 2: 471. 1793. = Sparganium L.

159. *Sphenopteris* Mett., Fil. Lechl. 1: 15. 1856. (Asplenium sect.). = Asplenium.
Sphenopteris Brongn., Hist. Veg. Foss. 1: 148. 1828. Form-genus.

160. *Stauropteris* Binney, Mem. & Proc. Manch. Lit. & Phil. Soc. 11: 69. 1872. (Carboniferous).
Stauropteris Griseb., Fl. Brasil XII. 1: 86. 1858. Malpighiaceae: Tetrapteryx Cav. sect. Stauropteryx.

161. *Steffensia* Presl, in Sternb., Vers. 2: 122. 1838. = Senftenbergia.
Steffensia C. DC., in DeCandolle, Prodr. XVI. 1: 240 (sect.). 1869. Piperaceae: Piper L. sect.
Steffensia Kunth, Linnaea 13: 609, 726. 1839. Piperaceae: Piper L. sect. Artanthe Endl.

162. *Stenochlamys* Griffith, Notulae 2: 610. 1849. = Davallia sp. dub.
Stenochlamys Baker, Ann. Bot. 7: 190. 1893. Musaceae: Heleconia L. sect.

*163. **Stenopteris** Saporta, Paleontologie Française, 2 ser., Veg. Pl. Jurassiques 1: 290. 1837. (Jurassic).
Stenoptera Presl, Rel. Haenk. 1: 95, t. 14. 1830. Orchidaceae.

164. **Stenosemia** Presl, Tent. Pterid., p. 237. 1836; C. Chr., Index Fil. 627. 1906. Aspidiaceae.
Stenosemis Drude in Engl. & Prantl, Pfl.-fam. II. 8: 215. 1898. Umbelliferae: Annesorrhiza Cham . et Schlechtd. sect.
Stenosemis E. Mey. Drege, Zwei Pflanzengeogr. Docum., p. 141, 148. 1843. = Umbelliferae: Annesorrhiza sect.

165. *Subularia* Ray, Syn. Meth. Stirp. Brit., p. 283. 1696 (Pre-Linnaean). = Isoëtes.
Subularia L., Sp. Pl., ed. 1: 642. 1753. Cruciferae.
Subularia Forsk., Fl. Aegypt.-Arab., p. 177. 1775. Cruciferae: Schouwia DC.

166. *Taeniophyllum* Polem., Amtl. Bericht ub. d. 25 Vers. Deutsch. Naturf. in Aachen, p. 345. 1849. = Nilssonia.
Taeniophyllum Blume, Bijdr., p. 355, t. 70. 1825. Orchidaceae.

*167. *Taeniopteris* Hooker, Gen. Fil., t. 76 B. 1842. = Vittaria.
Taeniopteris Brongn., Prodr., p. 61. 1828. (Sphenopteris). This genus needs to be conserved for the fossils, as a form-genus.

*168. **Tetrameridium** Gothan, Die Oberschlesische Steinkohlenflora I. Abh. K. Preuss. Geol. Landes. Anst. N.F. 75: 132-133. 1913. This genus needs to be conserved.
Tetrameridium Engl., in Engl. & Prantl, Pfl.-fam. III. 2a: 61. 1891. Saxifragaceae: Saxifraga L. sect.

*169. *Thamnopteris* Presl, Epim. Bot., p. 68. 1849. = Asplenium.
Thamnopteris Brongn., Tabl. Gen. Foss.; Extrait du Dict. Hist. Nat. 13: 35. 1849; P. Bertrand, Progressus Rei Bot. 4: 199-206, f. 6-9. (1911) 1913. Osmundaceae (Permian).

170. *Triblemma* J. Smith, Ferns Brit. and Foreign, p. 209. 1866 (as Asplenium sect.). = Diplazium.
Triblemma R. Br., ex DeCandolle, Prodr. 3: 113. 1828. Melastomataceae: Bertolonia Raddi.

*171. **Trichopteris** Presl, Del. Prag., p. 172. 1822. (Originally spelled Trichipteris); Scott, Genera, pl. 5. 1834; Presl, Tent. Pterid. 58, pl. 1, f. 10. 1836. "Since Presl accepted the revised spelling, the original one may be regarded as an error, subject to correction" .... vide Copeland (Gen. Fil., 97. 1947). However, Trichopteris of Presl (1822) is antedated by Trichopteris of Necker (1790).
Trichopteris Neck., Elem. 1: 110. 1790. Dipsacaceae: Pterocephalus Adans.

172. *Trichostegia* J. Smith, Lond. Jour. Bot. 1: 666. 1842. (Alsophila sect.). = Alsophila.
Trichostegia Turcz., Bull. Soc. Nat. Moscou 24: 81. 1851. Compositae: Athrixia Ker.-Gawl.

173. *Triphlebia* Baker, Malesia 3: 46. 1886. = Asplenium L. (cited as p. 41 in C. Chr., Ind. Fil., p. 652. 1906).
Triphlebia Stapf in Hooker, Icon. Pl., t. 2612. 1899; Th. Dyer, Fl. Capens. 7: 318. 1898. Gramineae: Stiburus Stapf.

174. *Wibelia* Bernhardi, in Schrader's Jour. 1800 (2): 122, pl. 1, f. 2. 1801. = Davallia.
Wibelia Fee, Genera, p. 331. 1850-52. = Tapeinidium Presl, Epim., p. 96. 1849 (as sect. of Microlepia); C. Chr., Ind. Fil., p. 631 (as genus). 1906; Copel., Gen. Fil., 53. 1947.
Wibelia Gaertn., in Mey. et Schreb., Fl. Wetterau 3: 97. 1801. Compositae: Crepis L.
Wibelia Pers., Synops. 1: 210. 1805. Violaceae: Paypayrola Aubl.
Wibelia Roehl., Deutschl. Fl., ed. 2, 2: 426. 1812. Compositae: Willemetia Neck.

*175. *Zaluzianskia* (ya) Necker, Acta Theod. Palat. Phys. 3: 303. 1775; O. Kuntze, Rev. Gen. Pl. 2: 823. 1891; Broun, Index N. Amer. Ferns, p. 115. 1938; Small, Ferns Southeastern States, p. 483. 1938. = Marsilea L.
Zalusianskya C. Chr., Ind. Fil., p. 659. 1906; Copeland, Gen. Fil., 230. 1947 (pro syn.). This spelling should be attributed to neither Necker nor O. Kuntze since their spellings were quite different.
Zaluzianskya F. W. Schmidt, Neue u. selt. Pfl., p. 11. 1793. Scrophulariaceae. This generic name is antedated by that of Necker, 1775 and should be either conserved or changed.

News and Notes

NOMINA GENERICA CONSERVANDA

On 1 March 1955 the General Committee on Botanical Nomenclature adopted by postal vote the following lists of *nomina generica conservanda*. The names put forward for conservation in those lists have thereby obtained a status as indicated in Article 25 of the International Code of Botanical Nomenclature (1952): botanists are authorized to retain them pending the decision of the next International Botanical Congress.

a. *Algae* The General Committee adopted the report of the Special Committee for Algae (1950-54) published in Taxon 3 : 234 . 1954. It is understood that the conservation of the names *Microchaete* and *Leptochaete* is postponed.

b. *Lichenes* The General Committee adopted for conservation the generic names of lichens printed in **bold face** type in the report of the Special Committee for Lichenes (1950-54), published in Taxon 3 : 235-238 . 1955.

c. *Phanerogamae* The General Committee adopted for conservation the generic names 982 *Paradisea* Mazz.; 1553 *Microstylis* (Nutt.) Eaton; 2908 *Kernera* Medik.; 5621 *Thryptomene* Endl.; 7097 *Alkanna* Tausch; 7393 *Scopolia* Jacq.; 9439 *Didelta* L'Herit., and 9581p. *Podospermum* DC. as published in the report of the Subcommittee for Phanerogamae (1950-54) in Taxon 3 : 240-243 . 1954.

FLORA OF CZECHOSLOVAKIA

The work on the large compendium "Flora ČSR — The Flora of Czechoslovakia" is being started now. The flora will appear in four series: *Cormophyta, Bryophyta, Fungi et Lichenes* and *Algae*. It will be the joint work of the leading Czechoslovak botanists. The volumes dealing with cryptogams will include practically all European species.

Within the next few years the volumes on the *Gasteromycetes* and *Phyllacteriaceae* (incl. *Tomentella, Thelephora* and terrestrial *Hydnum*) will appear in the mycological series. The third volume will probably deal with the *Phycomycetes - Oomycetes.*

In order to treat these groups as completely as possible a large amount of suitable material is needed. The undersigned would therefore welcome material of those groups, either in exchange or as a gift.

Please address all parcels to Dr Frant. Kotlaba, Secretary of the Mycofloristic Survey, Botanical Institute of the Charles University, Benátská 2, Praha II.

M. DE SOUSA DA CÂMARA †

On 23. April 1955 Professor Manuel (Emmanuelis) de Sousa da Câmara died at the age of 83 in Sacavem, Portugal. Prof. de Sousa da Câmara might well be called the Portuguese Saccardo: he was an outstanding mycologist who dedicated the greater part of his taxonomic work to the Fungi of Portugal and the Portuguese Overseas Territories.

I.O.P.

Palaeobotanical committee of the I.A.P.T.

In order to replace the late Professor Gothan on the Palaeobotanical Committee of the I.A.P.T. this committee has decided to coopt Prof. Dr R. Kräusel from Frankfurt am Main. Prof. Kräusel has accepted this appointment.

COMMITTEE ON BACTERIA

The International Botanical Congress has authorized the constitution of a Committee for Bacteria to serve as a liaison between bacteriologists and botanists, especially with regard to the problems of nomenclature (see also Taxon 3 : 191. 1954). The membership of this committee has been published in the International Bulletin of Bacteriological Nomenclature and Taxonomy 5 (1) : 51. 1955.

Chairman: O. N. Allen, Dept. of Bacteriology, University of Wisconsin, Madison, Wisconsin, U.S.A.

Members:

G. C. Ainsworth, Exeter, G.B.
R. S. Breed, Geneva, N.Y.
R. E. Buchanan, Ames, Iowa.
S. T. Cowan, London, G.B.
J. Lanjouw, Utrecht (*ex officio*).
J. Ramsbottom, London, G.B.
R. E. G. Pichi - Sermolli, Firenze.
Th. Thjøtta, Oslo.
T. Wiken, Zürich.

ABELMOSCHUS

Il n'est pas superflu d'attirer l'attention sur le fait que le genre *Abelmoschus* Medic. est valable d'après les lois actuelles de la nomenclature.

Je dirai d'abord qu'au point de vue taxinomique, il est indiqué de discuter sa validité comme genre, pour ne pas avoir l'air de discuter dans le vide. En effet, c'est Linné qui le premier, utilisa ce nom d'*Abelmoschus* comme épithète spécifique d'un *Hibiscus,* mais l'apparence singulière de cette plante qu'on avait rapprochée de plusieurs autres, induisit Medicus (*Malvenfam.*, p. 45, 1787) à en faire un genre. Depuis lors, le groupe a été considéré tantôt comme sous-genre (DC., Benth. et Hook.) tantôt comme genre (Moench *Method.*, p. 617, 1794) (K. Schum. in *Engl. u. Pr. Nat. Pflzfam.*) etc. Dans ma revision des *Hibiscus* (*Ann. Cons. bot.* IVe année, 49) en 1900, je l'avais considéré comme section, mais en 1924, à l'occasion d'analyses florales de nombreuses espèces d'*Hibiscus* (*Candollea* 2 : 83), je découvris que si le calice de ces fleurs est caduc avec elles, c'est parce que le calice est concrescent à sa base avec la base de la corolle et par conséquent, aussi avec la base de la colonne staminale. Le cas étant unique pour ce sous-genre (*Abelmoschus*) du genre *Hibiscus*, il me parut dès lors nécessaire de considérer les Abelmoschus comme un genre distinct et du reste très facile à distinguer morphologiquement des autres Hibiscus. Dans ces conditions, il m'a paru nécessaire de m'assurer, au point de vue de la nomenclature, de la validité de ce nom de genre qui est très ancien.

Or, il fut créé en 1787 par Medicus (*Ueber einige künstliche Geschlechter aus der Malvenfamilie,* p. 45) et caractérisé par plusieurs espèces que Medicus considère comme types du genre, de sorte qu'il n'y a aucun doute pour la typification.

Malheureusement, nous trouvons dans la troisième dissertation de Cavanilles la description d'un genre *Laguna* qui est certainement identique à l'*Abelmoschus* de Medicus, de sorte que, ces deux noms portant la même date, on peut hésiter sur celui qu'il faut adopter, d'autant plus que Cavanilles a fait figurer son nom dans un appendice de sa deuxième Dissertation, p. IV (datant de 1786). C'est ainsi que le nom de *Laguna* fut publié en 1786, mais avec une description abrégée, non accompagnée de figure ni de citation d'espèce, de sorte qu'on ne peut établir avec certitude que Cavanilles avait en vue la même plante qu'il décrit et figure dans la troisième Dissertation, car il déclare expressément dans le titre de l'appendice en question: Genera elucidenda in tertia dissertatione.

Il s'agit donc là incontestablement d'un nomen provisorium qui est déclaré non valable en vertu de l'Art. 43 des Règles.

Dans ces conditions, le premier botaniste qui adopta le genre après sa création avait le droit de choisir entre les deux noms de même date, *Laguna* et *Abelmoschus*. Or, ce premier auteur fut Moench (*Method.* 617 (1794)) et il a choisi *Abelmoschus*.

Il est donc certain que ce groupe d'espèces rattachées jusqu'ici au genre *Hibiscus* doit porter le nom d'*Abelmoschus,* s'il en est séparé, séparation qui se justifie bien à cause du calice légèrement soudé à la base avec la base de la corolle et de l'épanouissement de celle-ci par déchirure latérale et longitudinale du calice.

B. P. G. Hochreutiner (Genève)

ABREVIATURAS DOS NOMES DE AUTORES

O motivo da presente critica, situa-se na preocupação constante dos botânicos usarem comumente o nome abreviado do autor de um binômio. O uso de se abreviar o nome do autor de um binômio iniciou-se há muitos anos e hoje, devido a enorme quantidade deles não é mais possivel guardar na memoria tão grande quantidade.

Muitas abreviaturas usam-se de diversos modos nem mesmo obedecendo um padrão (monosilabica, dissilabica etc.) a comecar pela abreviatura do nome de Linneu que poderemos escreve-la:

L. - LIN. - - LINN.

Outros nomes prestam-se a grandes confusoẽs como Schl. ou Schlecht. (Schlechter e Schlechtendal), que só pela data e pelo assunto é que poderemos distingui-los. Naturalmente quando se está estudando uma monografia sabe-se perfeitamente quais são os autores de tais binômios, mas, quando se lê um artigo vago, de uma maneira geral, não sabemos de quem se trata. Para os novos ciêntistas da botânica atual as suas abreviaturas são ignoradas.

Na época de Linneu, era muito reduzido o número de espécies e menor ainda o de autores de binômios. Atualmente não é compreensivel que continuemos a usar as abreviaturas, pois grandes foram as transformaçoes porque passou a botânica nestes 2 séculos.

Proporemos no proximo Congresso Internacional de Botânica de Montreal de 1959 o uso obrigatorio do sobrenome inteiro do autor.

Exemplo: - *Leonurus sibiricus*, Linneu
Galinsoga parviflora, Cavanilles
Chaptalia nutans, Hemsley

Quando houver 2 ou mais nomes iguais, acrescentar-se-á o uso da inicial do nome. Assim os Bailey temos:

C. Bailey, L. H. Bailey, F. M. Bailey, W. W. Bailey, E. Z. Bailey — que significa irmão, pae, tio, primo etc. ou nem parente é.

Existem, não há dúvidas, algumas exepçoes, como para a sigla H. B. K. — de Humboldt, Bonpland e Kunth — que poderá ser escrita como era antigamente, sem perigo de confusão.

Exemplo: *Verbena litoralis*, H. B. K.

para os nomes muito comuns em que existem fisiologistas e taxonomistas usaremos a inicial do nome e o sobrenome por extenso:

Exemplo: *Leonotis nepetaefolia*, R. Brown

este ultimo processo seria o melhor a adotarmos pois (apenas com uma letra a mais) muito distinguiria de qualquer outro. Neste caso Linneu se escreveria C. Linneu.

Exemplo: *Solanum nigrum*, C. Linneu

Não seria proibido se escrever os primeiros nomes abreviados como no seguinte exemplo:

Borreria verticillata, G. F. W. Meyer

Por ultimo apelamos para que se publique um "INDEX" das antigas abreviaturas com seus nomes correspondentes para iniciarmos uma nova era mais concentânea com a época atual. J. Angely (Curitiba)

PDB IN PLASTIC ENVELOPES FOR PEST CONTROL IN THE SMALL HERBARIUM

The Carolina Biological Supply Company, Elon College, North Carolina, USA, plans to manufacture the plastic envelope to be used in connection with PDB for pest control in the small herbarium, and for use in safely sending and returning borrowed specimens (Taxon 3 : 84-88. 1954). Anyone having any additional suggestions for the manufacturer is requested to write to him directly. — Hamilton P. Traub.

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